

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

JPMORGAN CHASE & CO.,
JPMORGAN CHASE BANK, N.A. and
JPMORGAN CHASE ELECTRONIC
FINANCIAL SERVICES, INC.,

Plaintiffs,

v.

AFFILIATED COMPUTER SERVICES, INC. and
ACS STATE & LOCAL SOLUTIONS, INC.,

Defendants.

Civil Action No: 08-189-SLR

**EXHIBITS TO FIRST AMENDED AND SUPPLEMENTAL COMPLAINT FOR
DECLARATORY JUDGMENT AND PATENT INFRINGEMENT**

VOLUME 1 – EXHIBITS A-F

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Dated: August 28, 2008

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on August 28, 2008, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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EXHIBIT A



US005946669A

United States Patent [19]
Polk

[11] **Patent Number:** **5,946,669**
[45] **Date of Patent:** **Aug. 31, 1999**

- [54] **METHOD AND APPARATUS FOR PAYMENT PROCESSING USING DEBIT-BASED ELECTRONIC FUNDS TRANSFER AND DISBURSEMENT PROCESSING USING ADDENDUM-BASED ELECTRONIC DATA INTERCHANGE**
- [75] Inventor: **John Polk**, McLean, Va.
- [73] Assignee: **Lockheed Martin Corporation**, Bethesda, Md.
- [21] Appl. No.: **08/941,187**
- [22] Filed: **Sep. 30, 1997**
- [51] **Int. Cl.⁶** **G06F 17/60**
- [52] **U.S. Cl.** **705/40; 705/39; 705/38**
- [58] **Field of Search** **705/40, 39, 38, 705/45; 707/104; 379/91.01**

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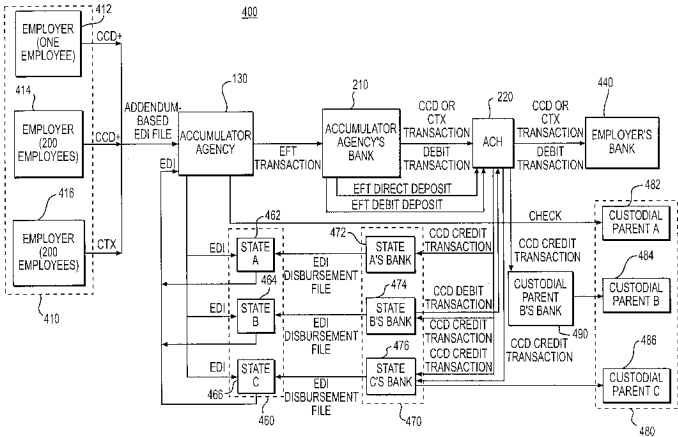
(List continued on next page.)

Primary Examiner—Emanuel Todd Voeltz
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Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

[57] **ABSTRACT**

This disclosure describes a payment and disbursement system, wherein an initiator authorizes a payment and disbursement to a collector and the collector processes the payment and disbursement through an accumulator agency. The accumulator agency processes the payment as a debit-based transaction and processes the disbursement as an addendum-based transaction. The processing of a debit-based transaction generally occurs by electronic funds transfer (EFT) or by financial electronic data interchange (FEDI). The processing of an addendum-based transaction generally occurs by electronic data interchange (EDI).

48 Claims, 22 Drawing Sheets



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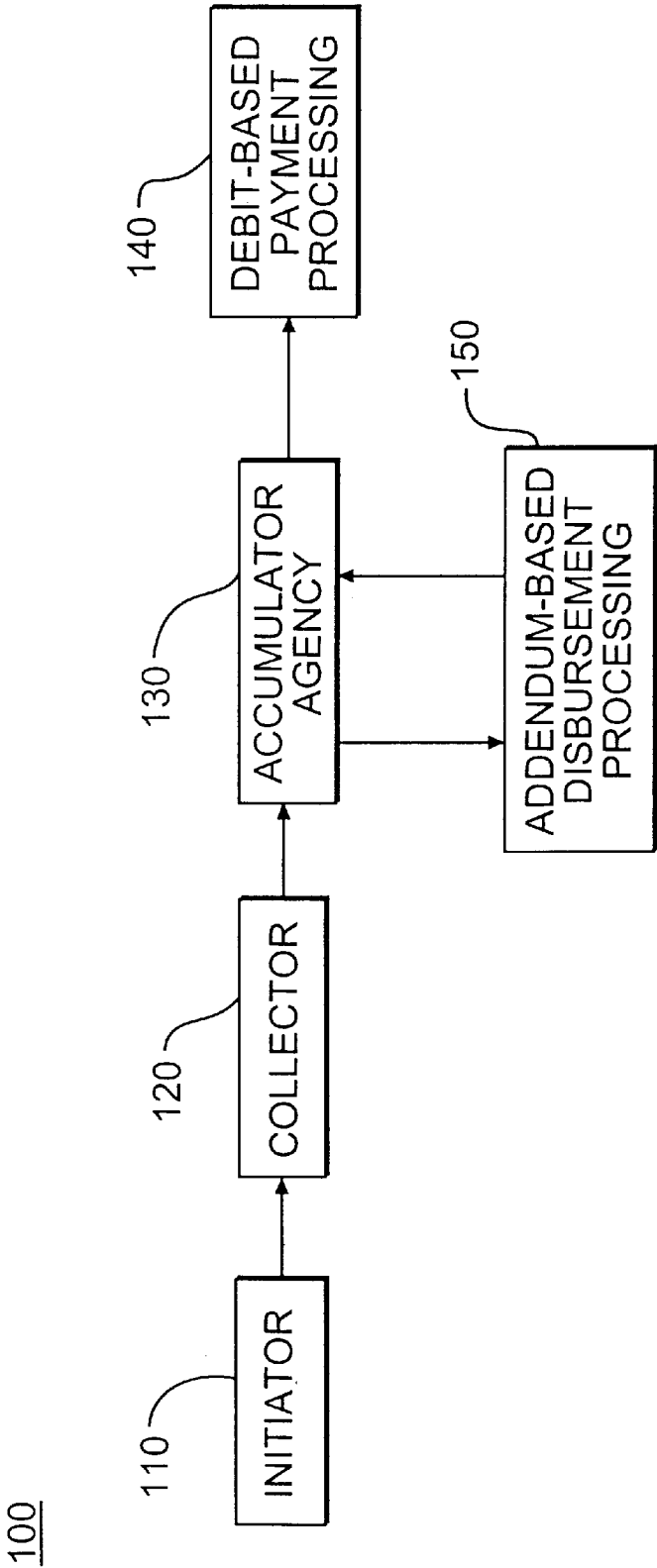


FIG. 1

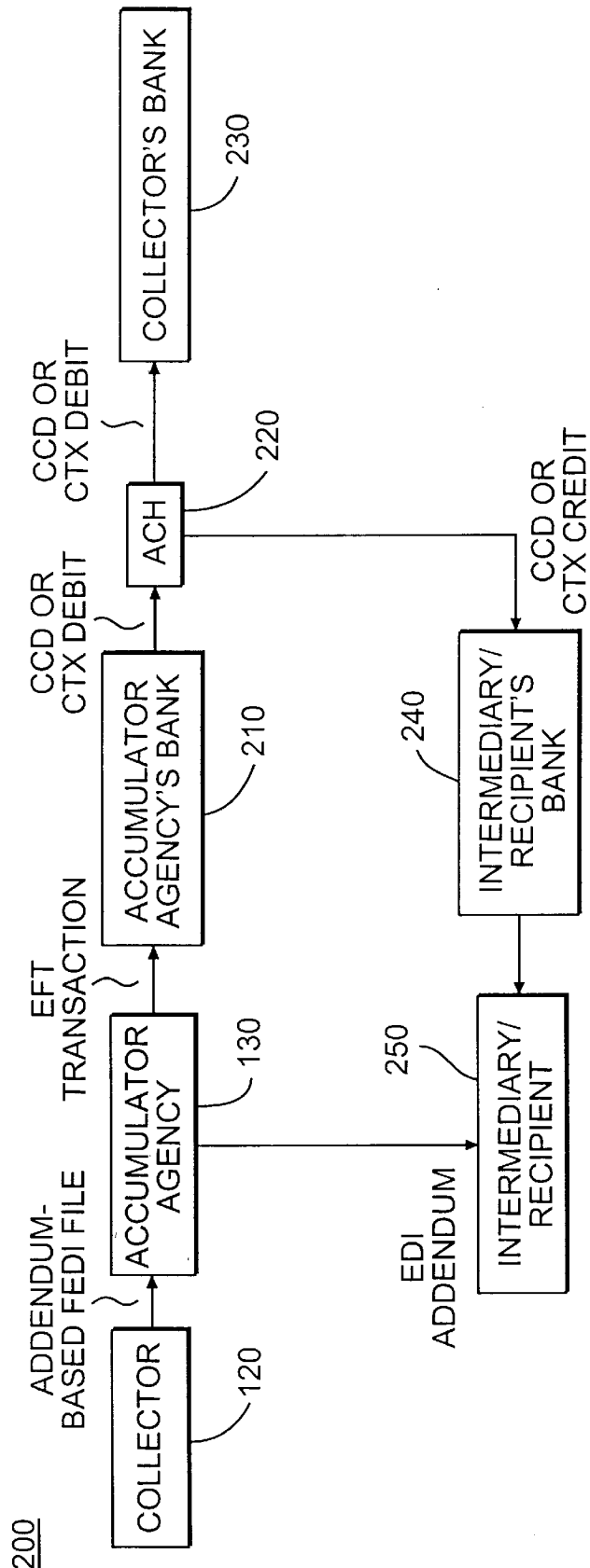


FIG. 2

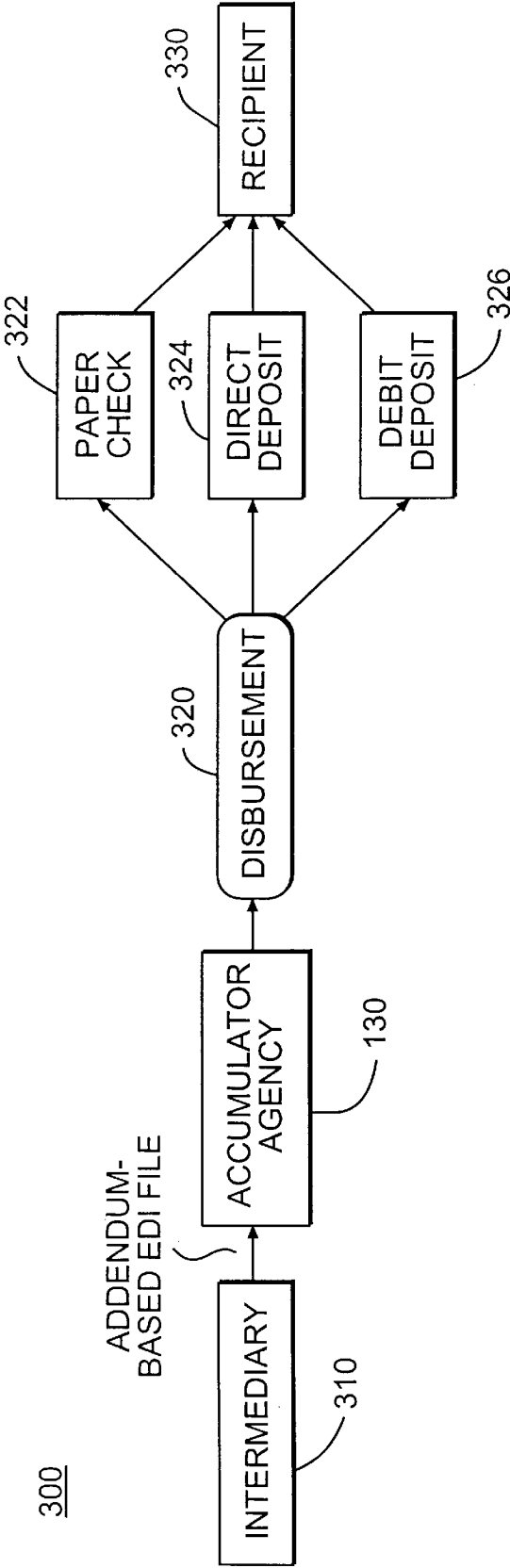
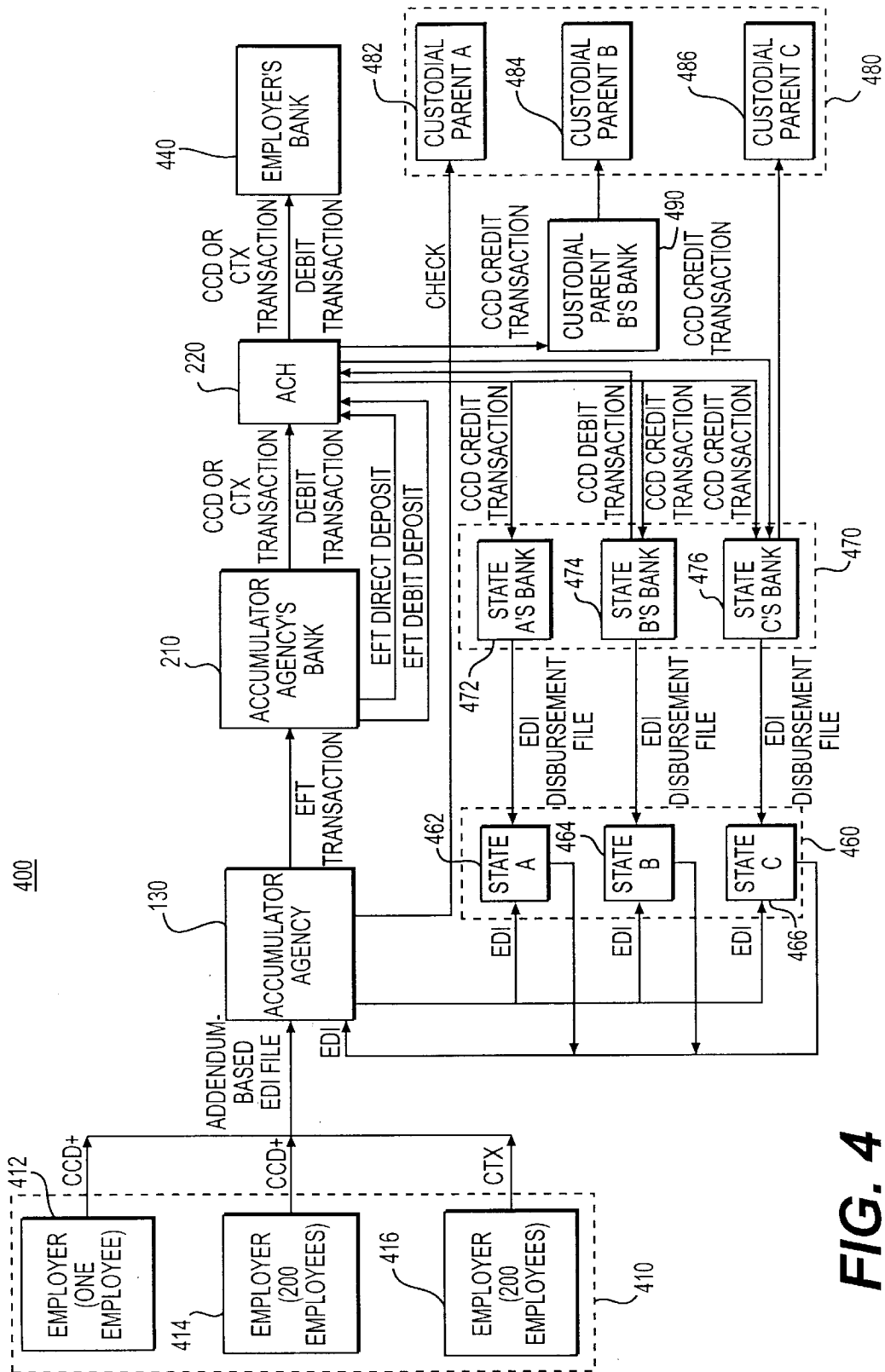


FIG. 3



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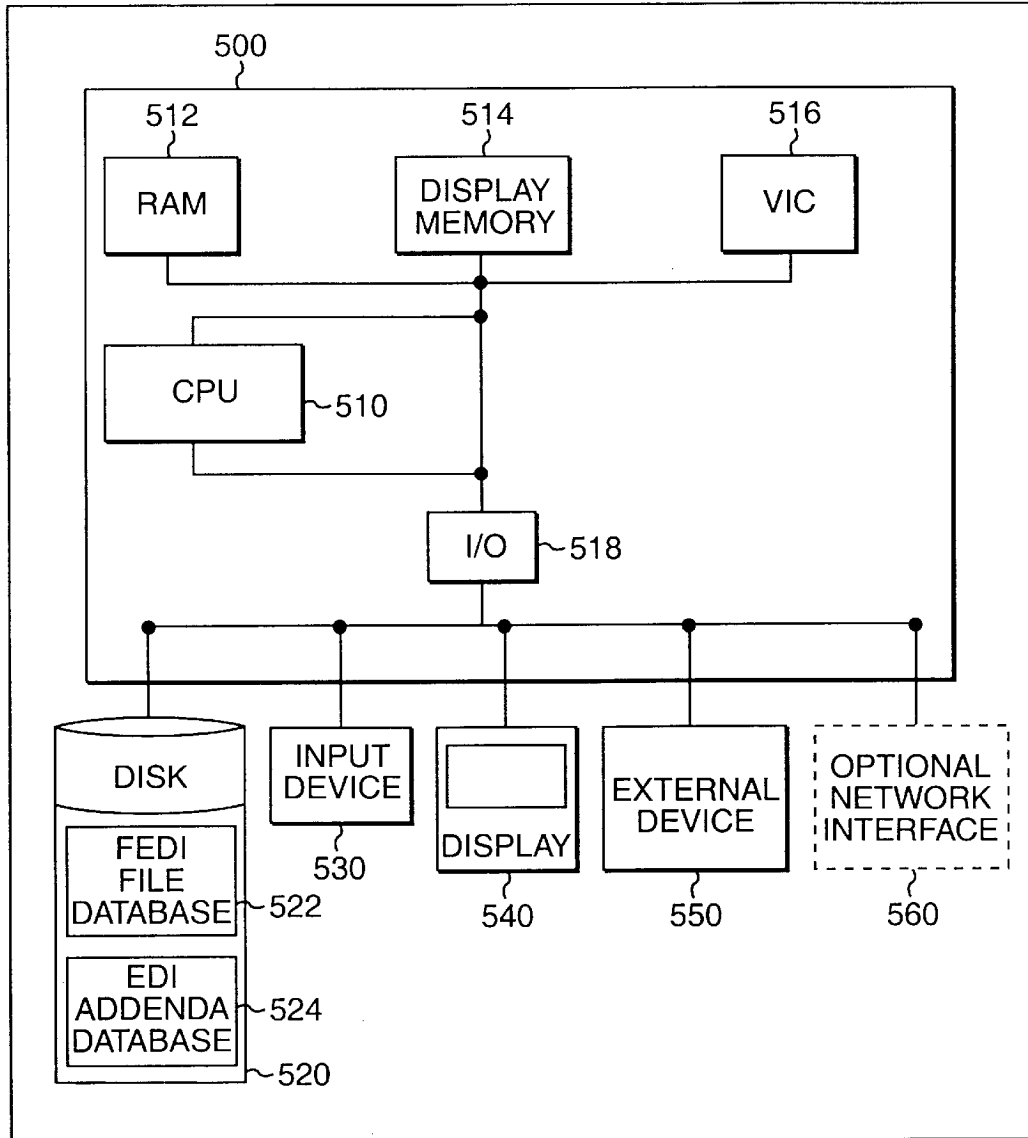
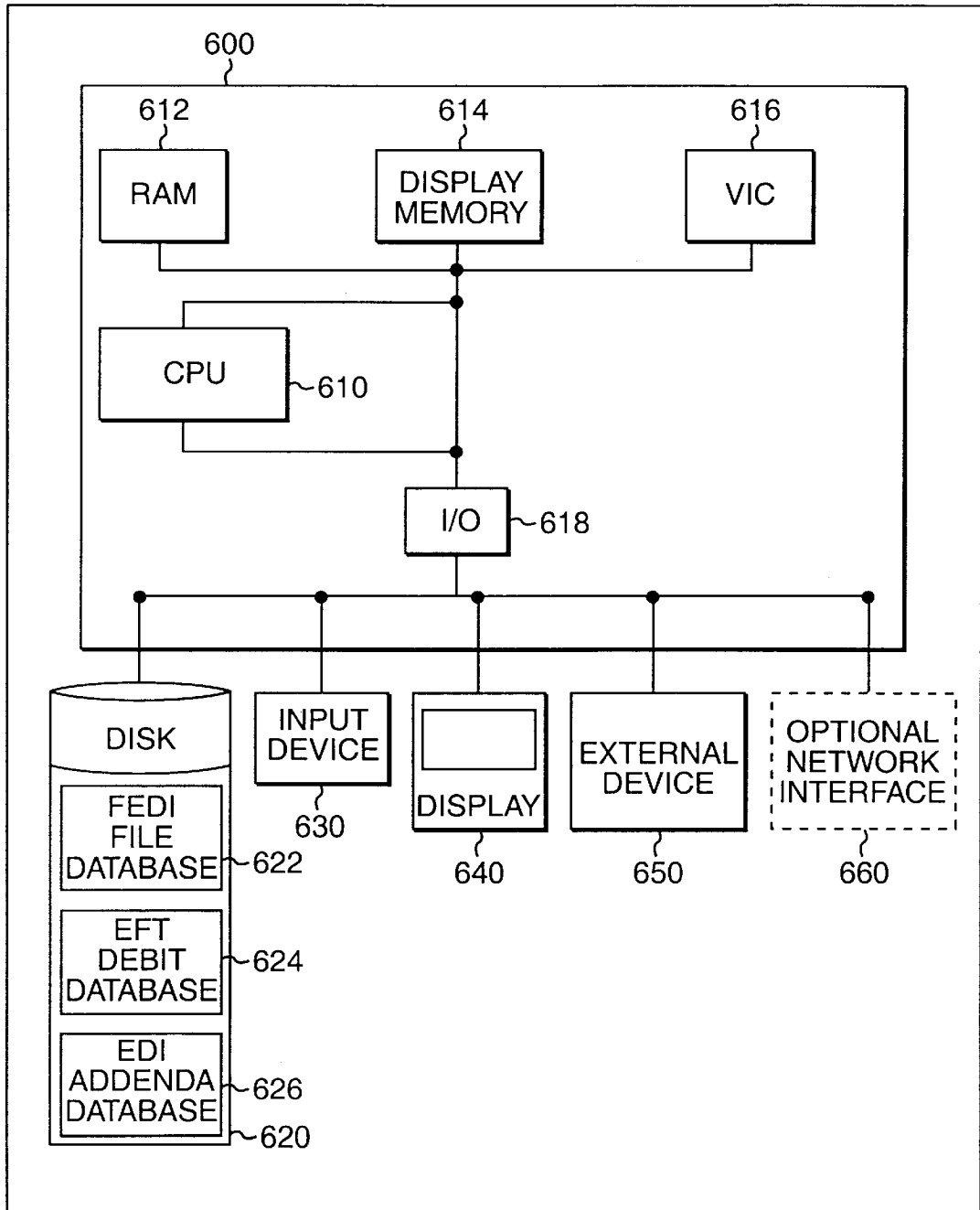


FIG. 5

130**FIG. 6**

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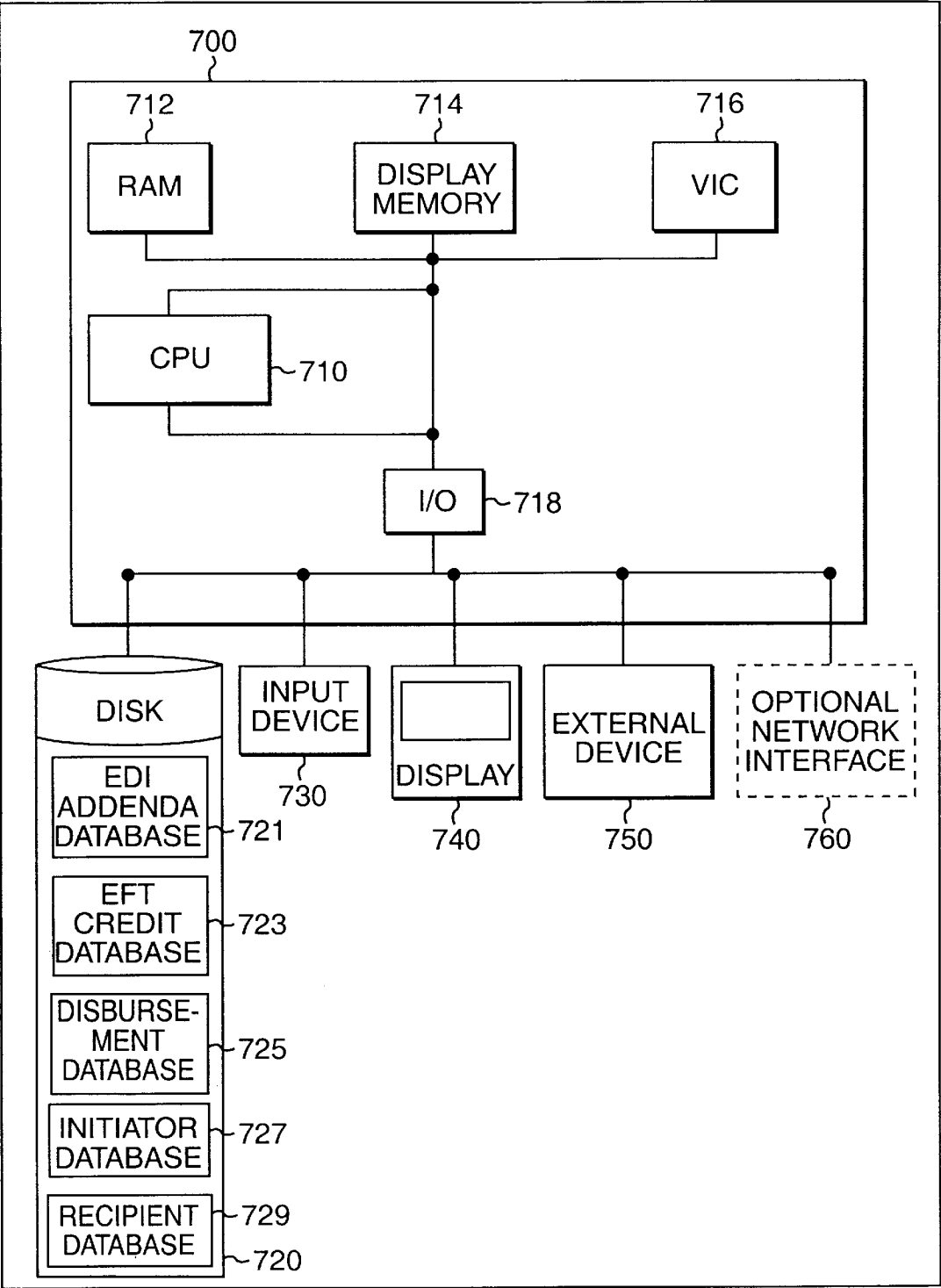


FIG. 7

FIELD	1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	IDENTIFICATION NUMBER	RECEIVING COMPANY NAME	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
FIELD INCLUSION REQUIREMENT	M	M	M	M	R	M	O	R	O	M	M
CONTENTS	'6'	NUMERIC	TTTTAAAA	NUMERIC	ALPHANUMERIC	\$\$\$\$\$\$\$*	ALPHANUMERIC	ALPHANUMERIC	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	1	2	8	1	17	10	15	22	2	1	15
POSITION	01-01	02-03	04-11	12-12	13-39	30-39	40-54	55-76	77-76	79-79	80-94

FIG. 8A

FIELD	1	2	3	4	5	6	7	8	9
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	TOTAL AMOUNT	IDENTIFICATION NUMBER	NUMBER OF ADDENDA RECORDS	RECEIVING COMPANY NAME/ID NUMBER
FIELD INCLUSION REQUIREMENT	M	M	M	M	R	M	O	R	R
CONTENTS	'6'	NUMERIC	TTTTAAAA	NUMERIC	ALPHANUMERIC	\$\$\$\$\$\$\$	ALPHANUMERIC	NUMERIC	ALPHANUMERIC
LENGTH	1	2	8	1	17	10	15	4	16
POSITION	01-01	02-03	04-11	12-12	13-39	30-39	40-54	55-58	59-74

FIELD	10	11	12	13
DATA ELEMENT NAME	RESERVED	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
FIELD INCLUSION REQUIREMENT	N/A	O	M	M
CONTENTS	BLANK	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	2	2	1	15
POSITION	75-76	77-78	79-79	80-94

FIG. 8B

FIG. 9A

FIELD	1	2	3	4	5
DATA ELEMENT NAME	RECORD TYPE RECORDING	ADDENDA TYPE CODE	PAYMENT RELATED INFORMATION	ADDENDA SEQUENCE NUMBER	ENTRY DETAIL SEQUENCE NUMBER
FIELD INCLUSION REQUIREMENT	M	M	O	M	M
CONTENTS	'7'	'0.5'	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	1	2	80	4	7
POSITION	01-01	02-03	04-83	84-87	88-94

FIG. 9B

ELEMENT	COMMENTS	CONTENT	ATTRIBUTES		
			1	2	3
	SEGMENT IDENTIFIER	DED	M	ID	3/3
DED01	APPLICATION IDENTIFIER	CS	M	ID	2/2
DED02	CASE IDENTIFIER	XXXXXXXXXX	M	AN	1/20
DED03	PAY DATE	YYMMDD	M	DT	6/6
DED04	PAYMENT AMOUNT	\$\$\$\$\$\$\$\$CC	M	N2	1/10
DED05	NON-CUSTODIAL PARENT SOCIAL SECURITY NUMBER	XXXXXXXXXX	M	AN	9/9
DED06	MEDICAL SUPPORT INDICATOR	'Y'-YES, 'N'-NO	M	AN	1/1
DED07	NON-CUSTODIAL PARENT NAME	XXXXXXXXXX	O	AN	1/10
DED08	FIPS CODE	XXXXXX	O	AN	5/7
DED09	EMPLOYMENT TERMINATION INDICATOR	'Y'-YES	O	AN	1/1

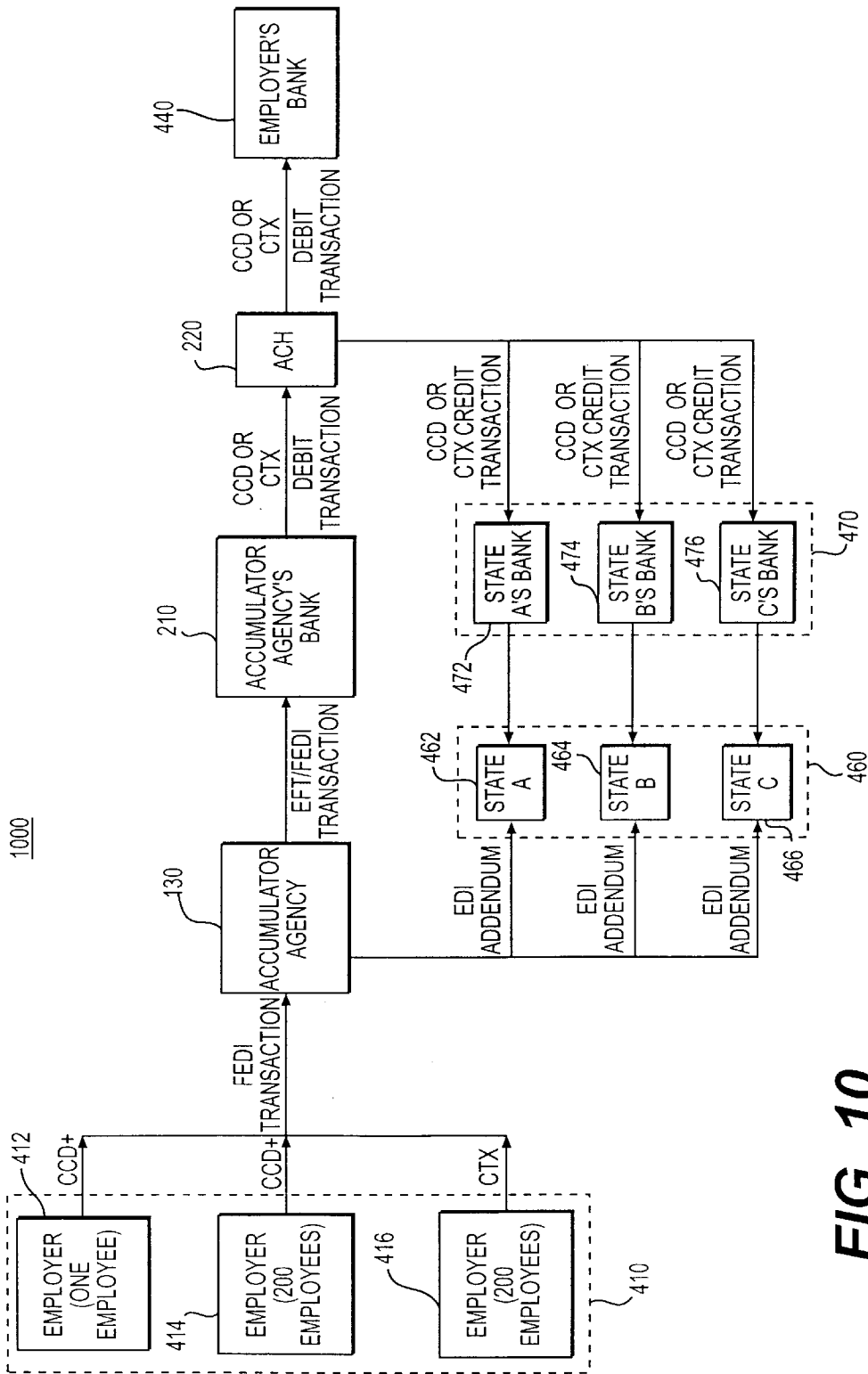


FIG. 10

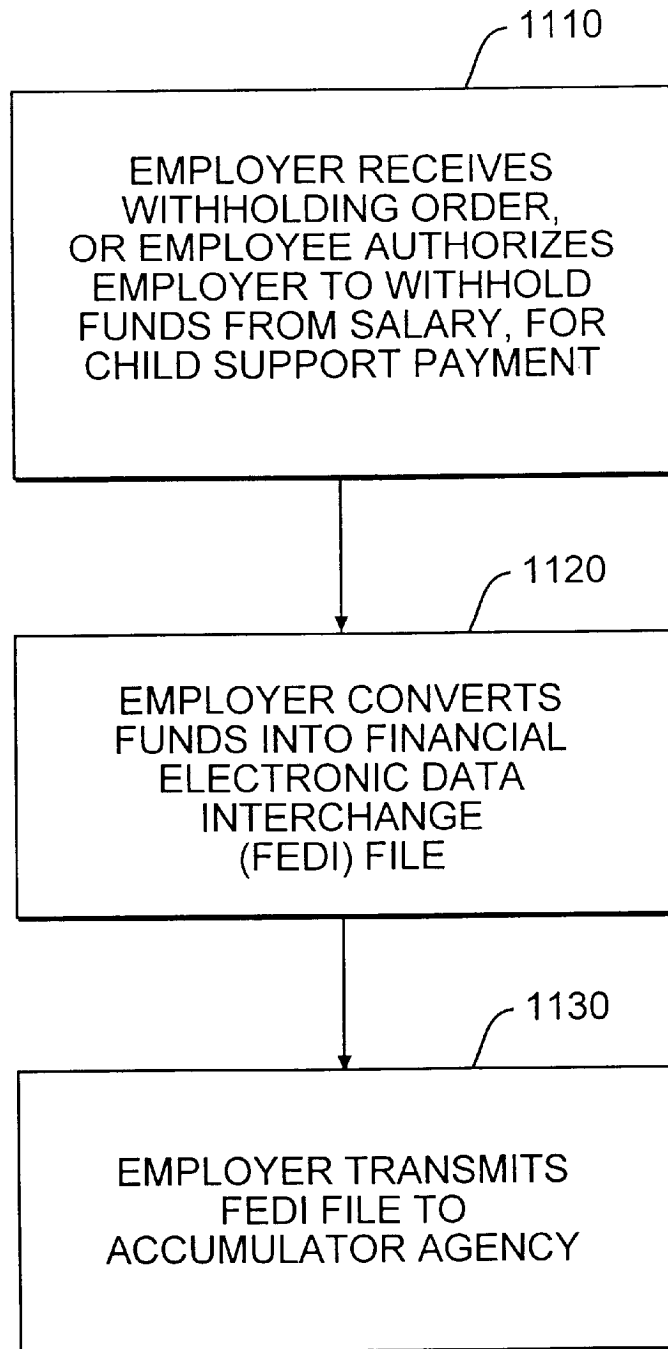
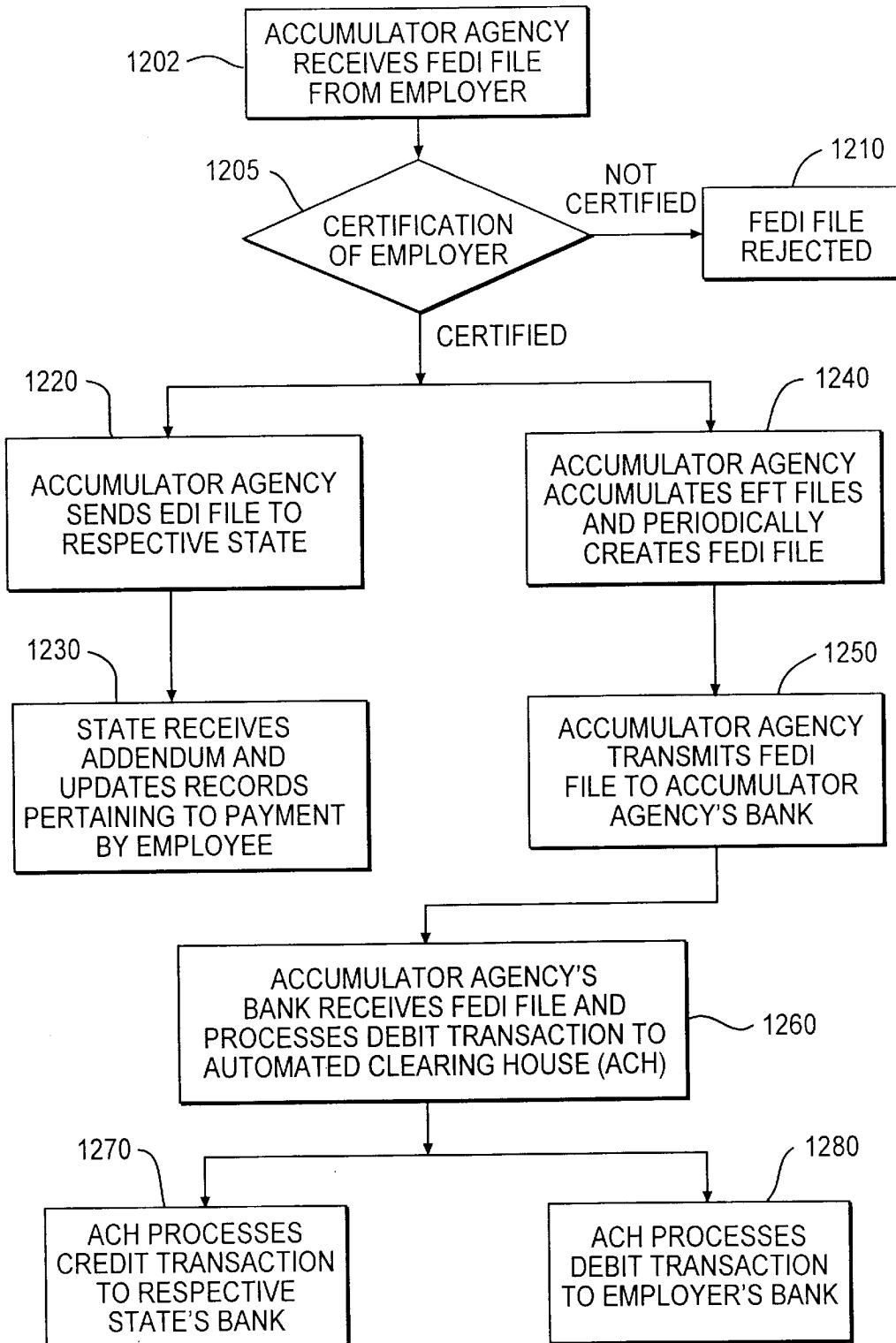


FIG. 11

**FIG. 12**

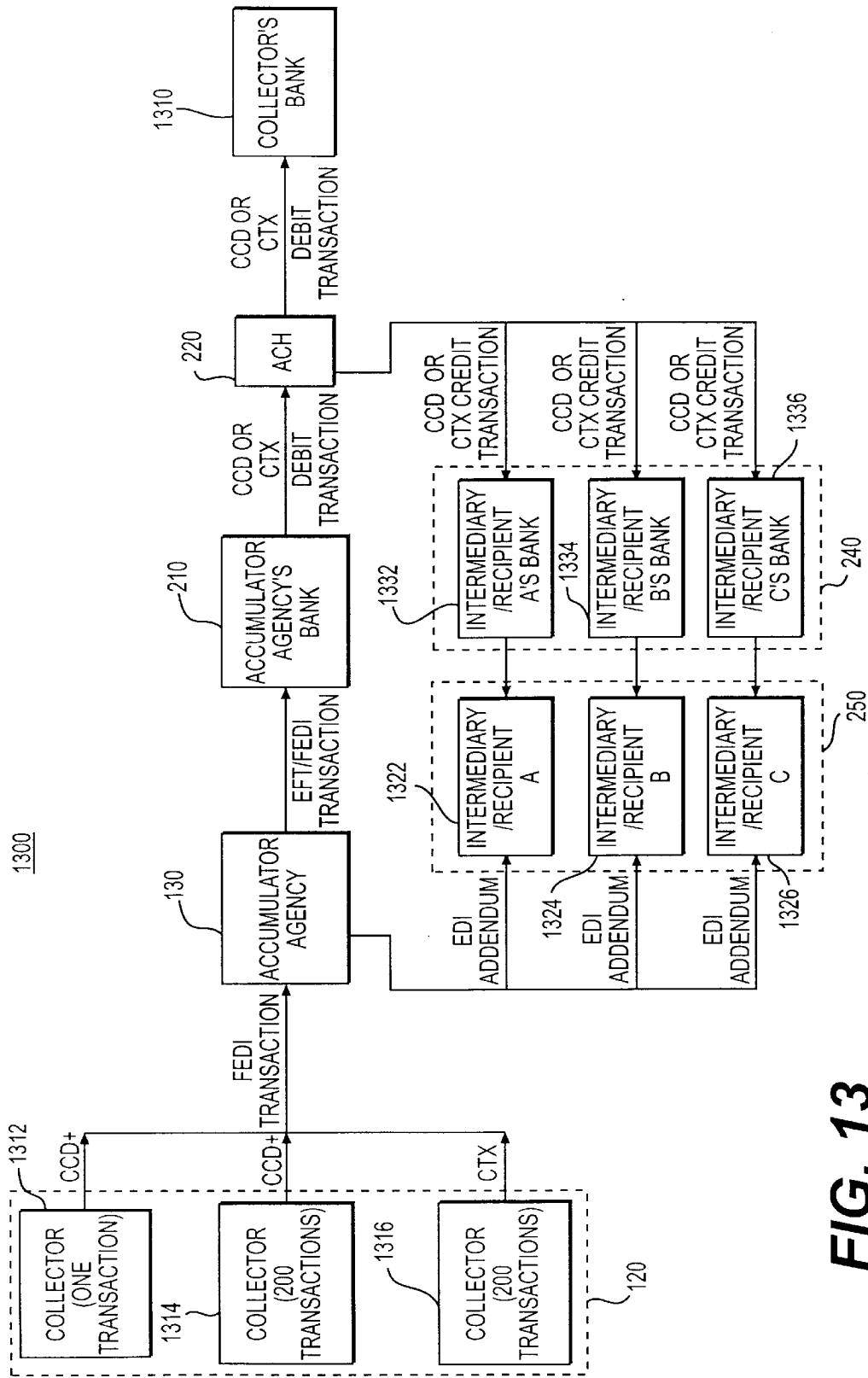


FIG. 13

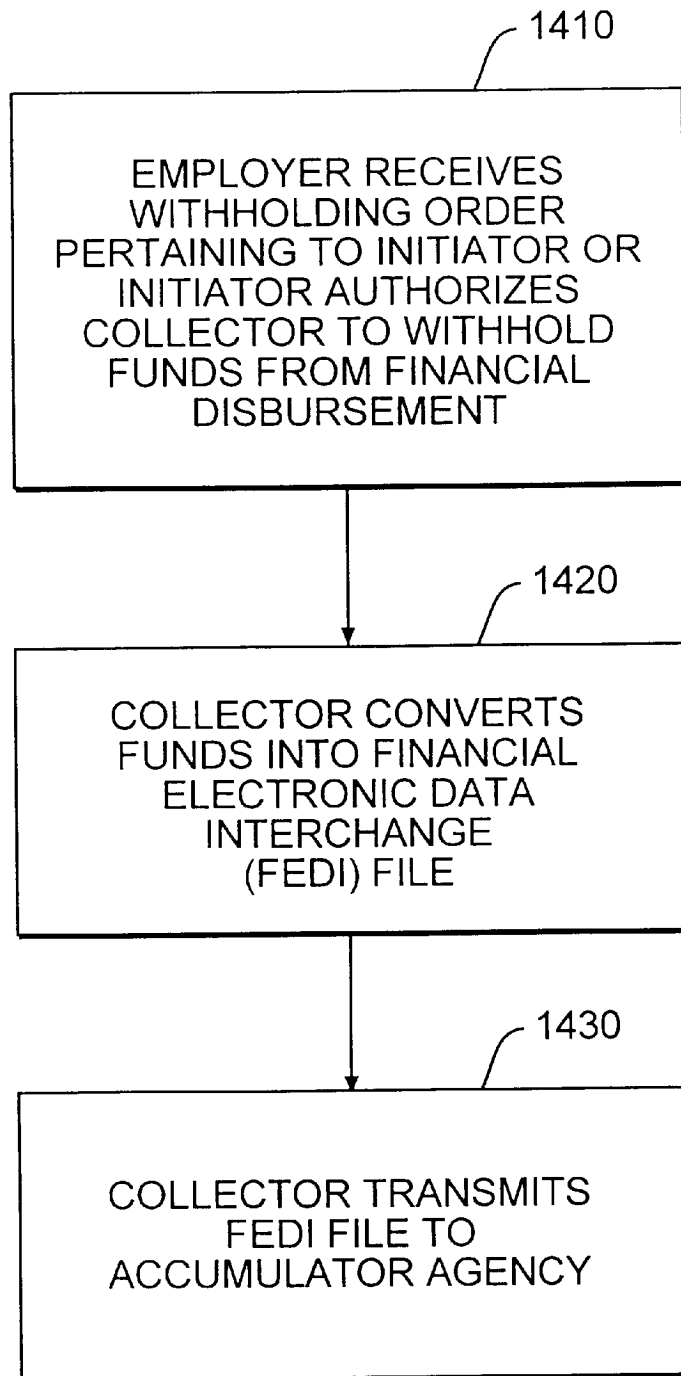
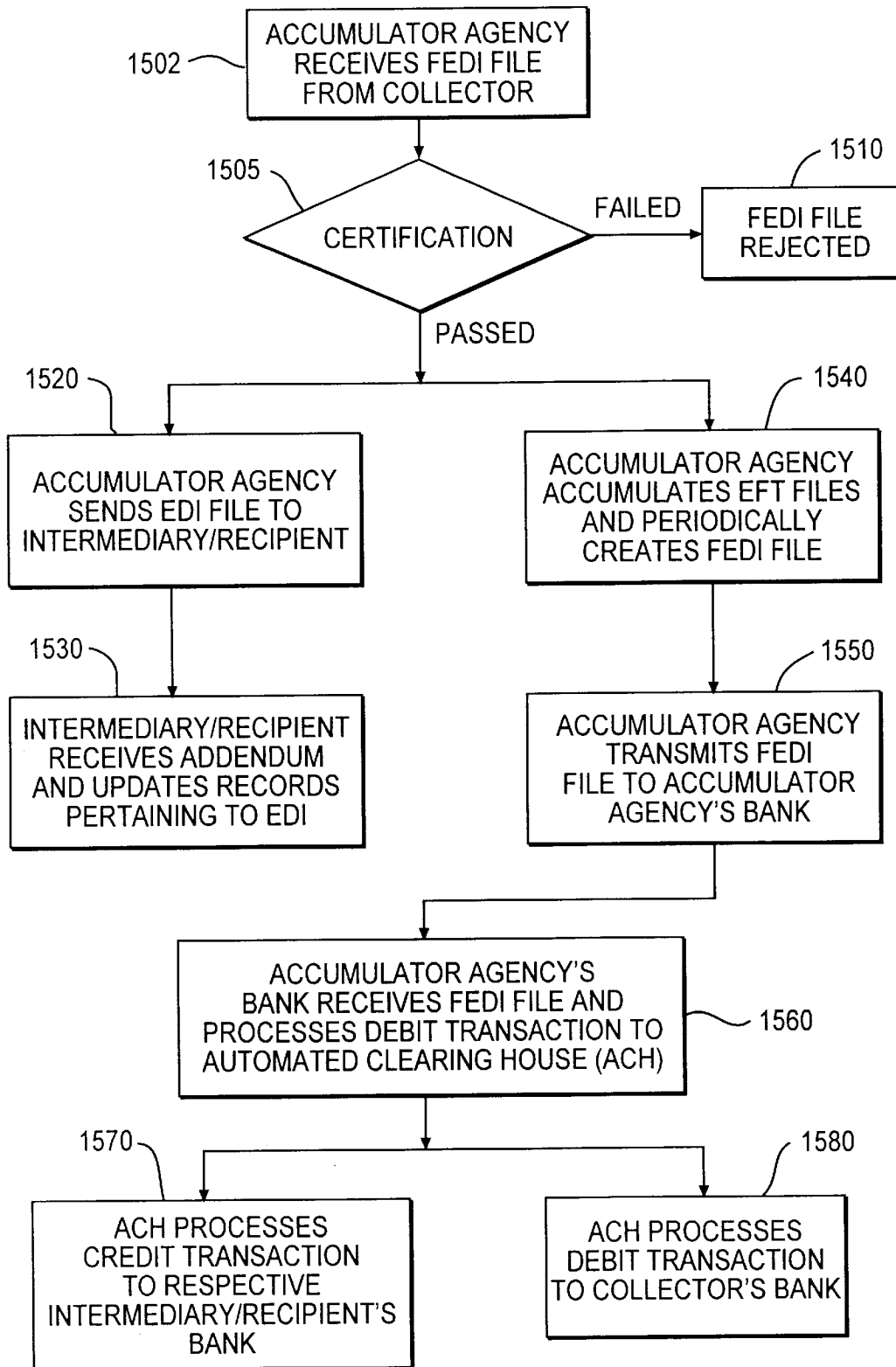


FIG. 14

**FIG. 15**

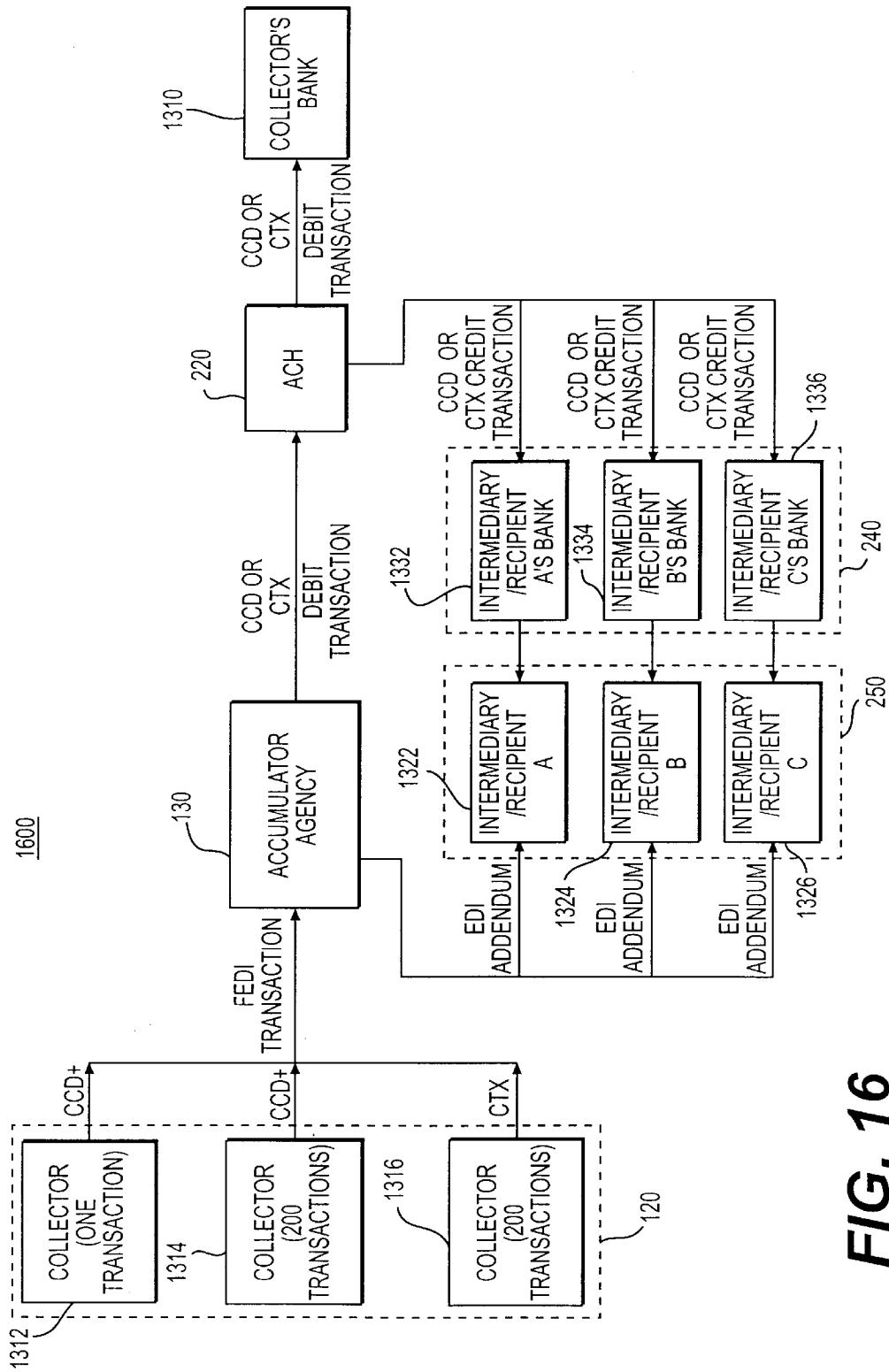


FIG. 16

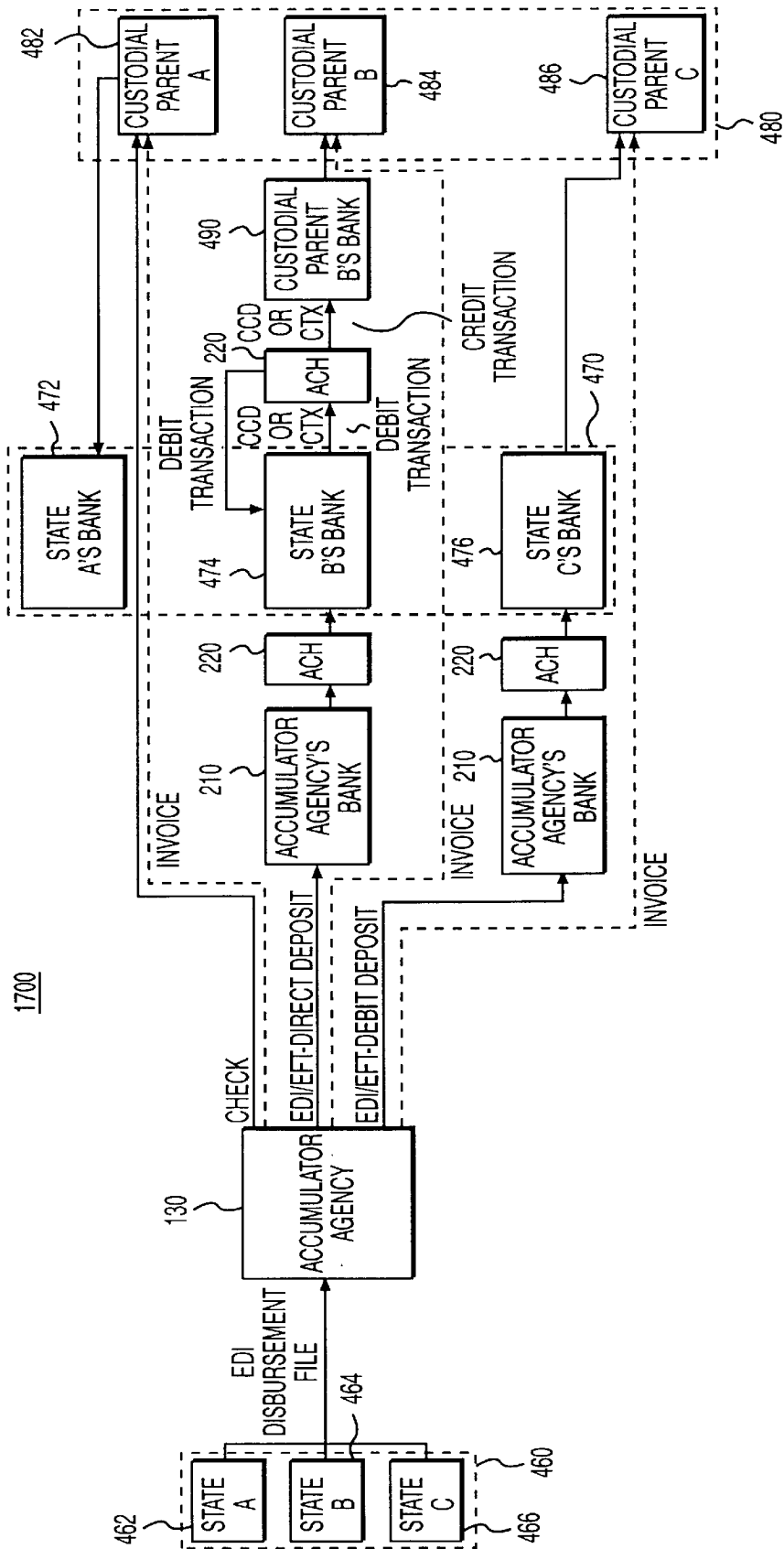


FIG. 17

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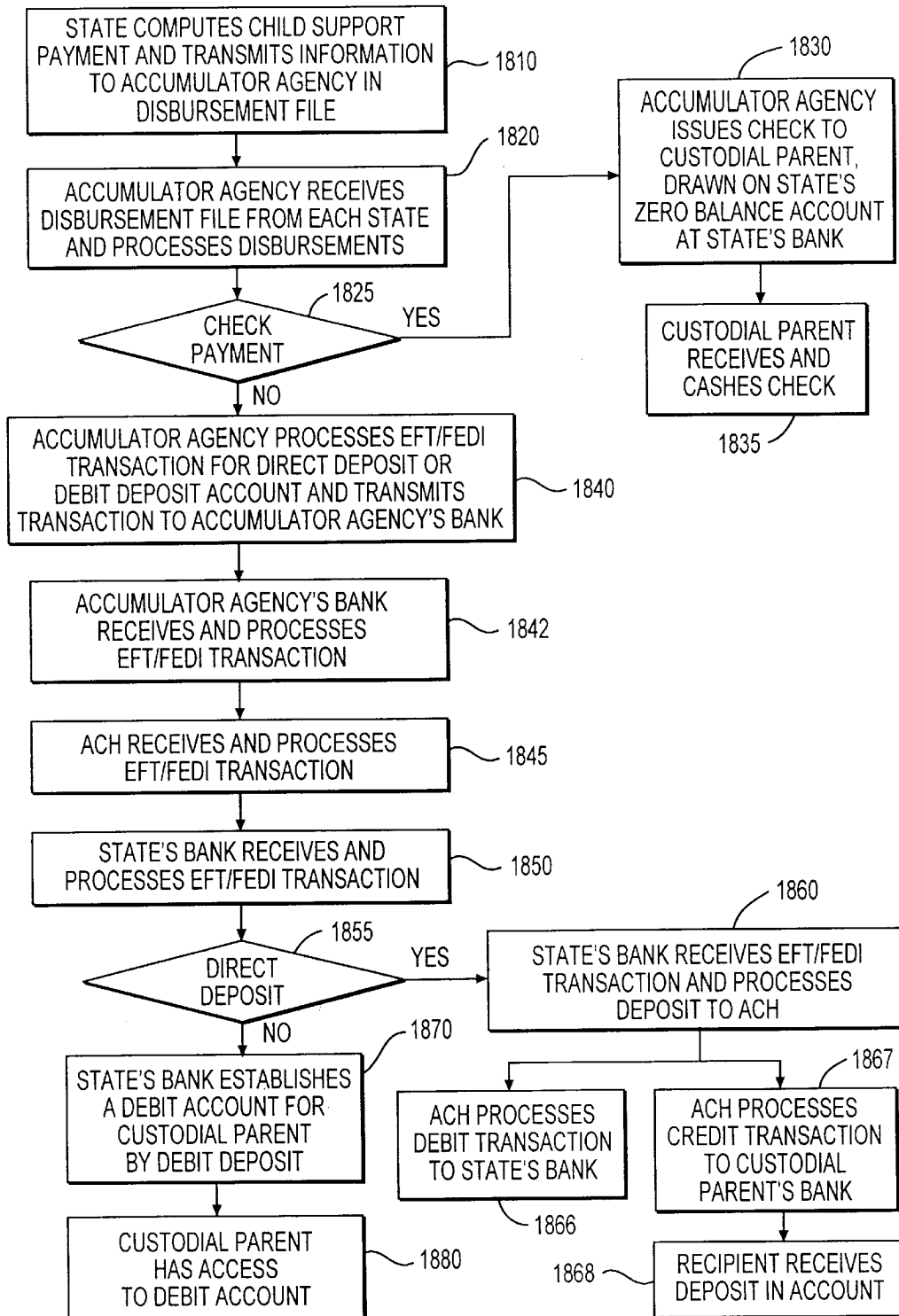


FIG. 18

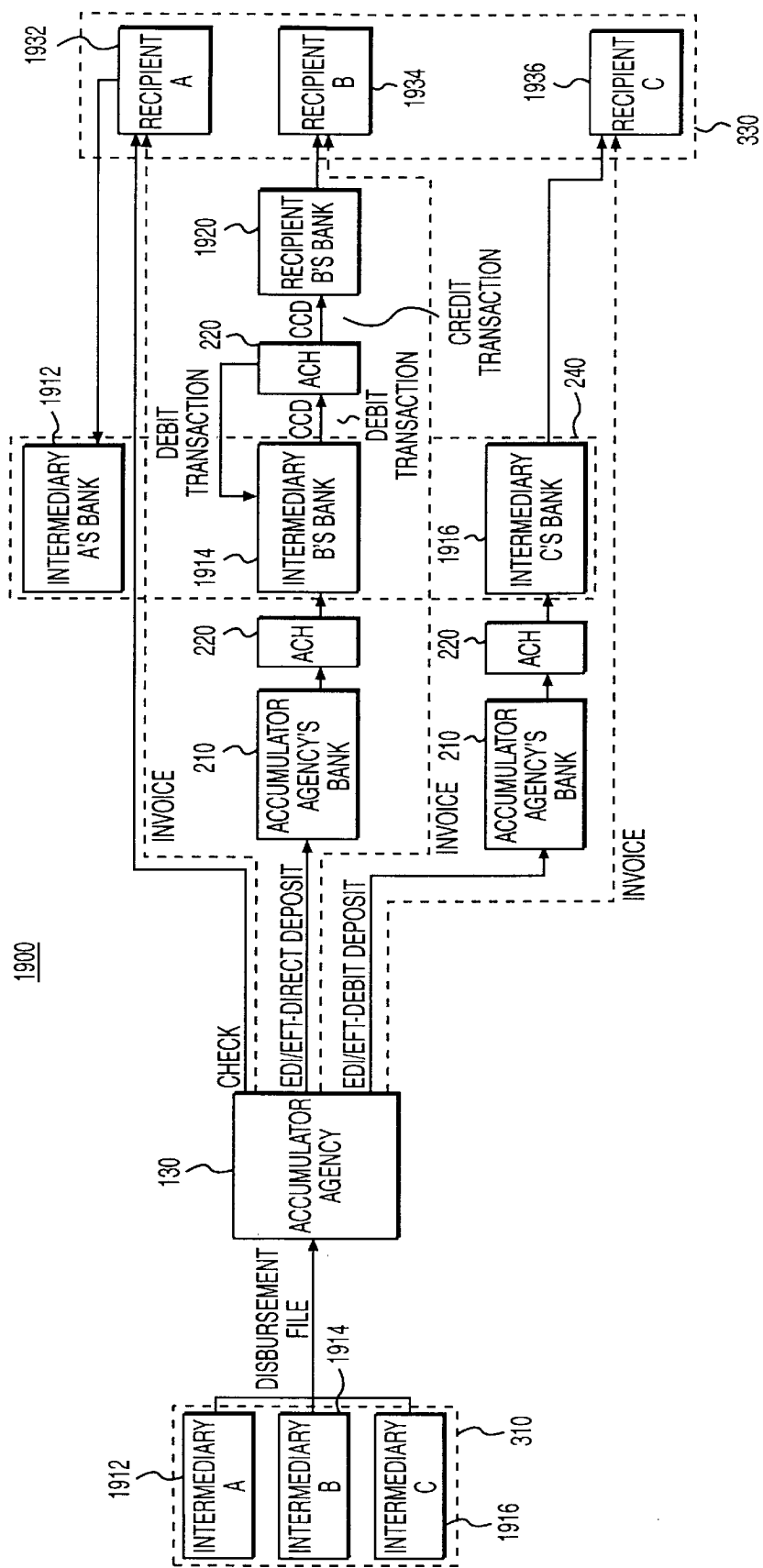


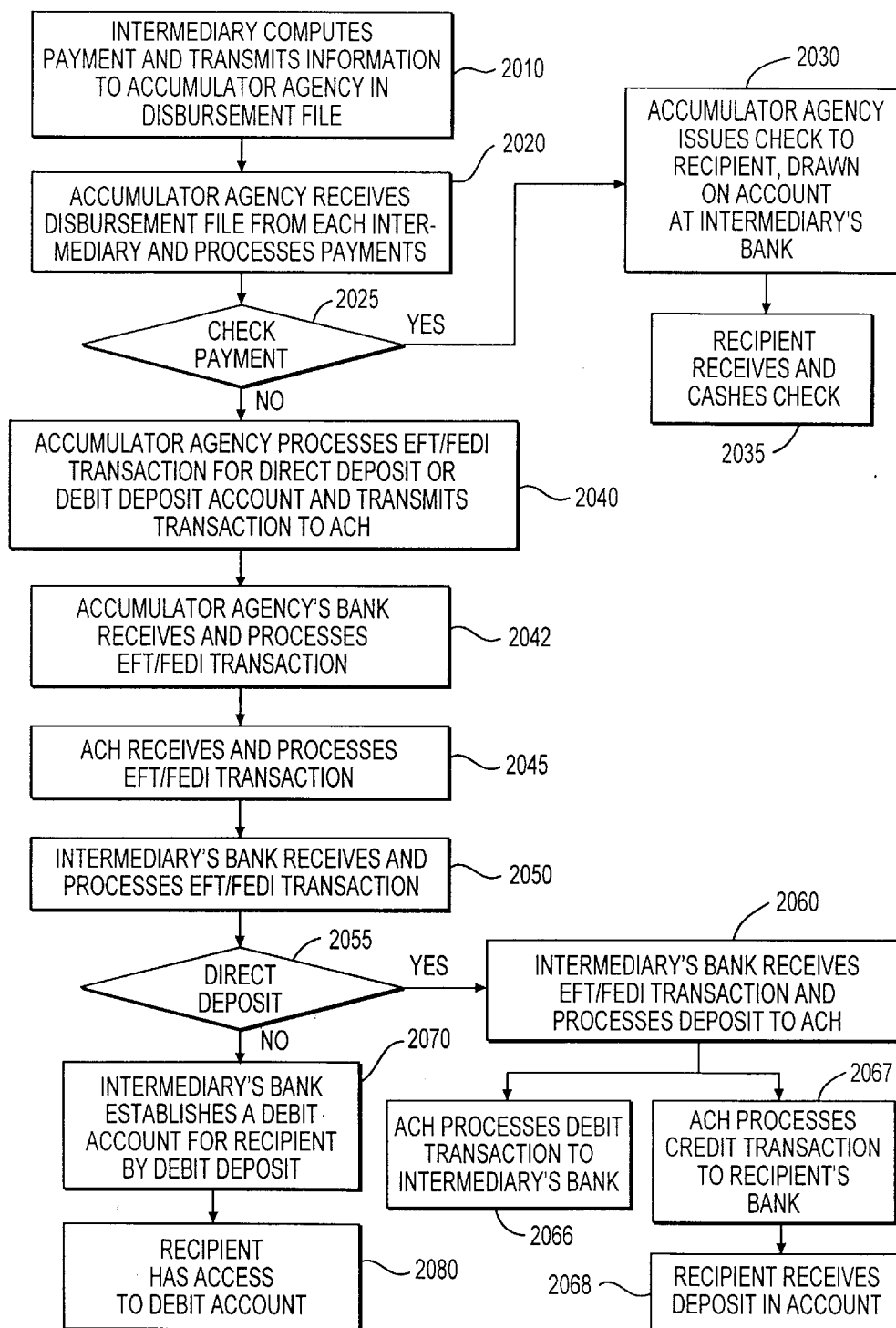
FIG. 19

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**FIG. 20**

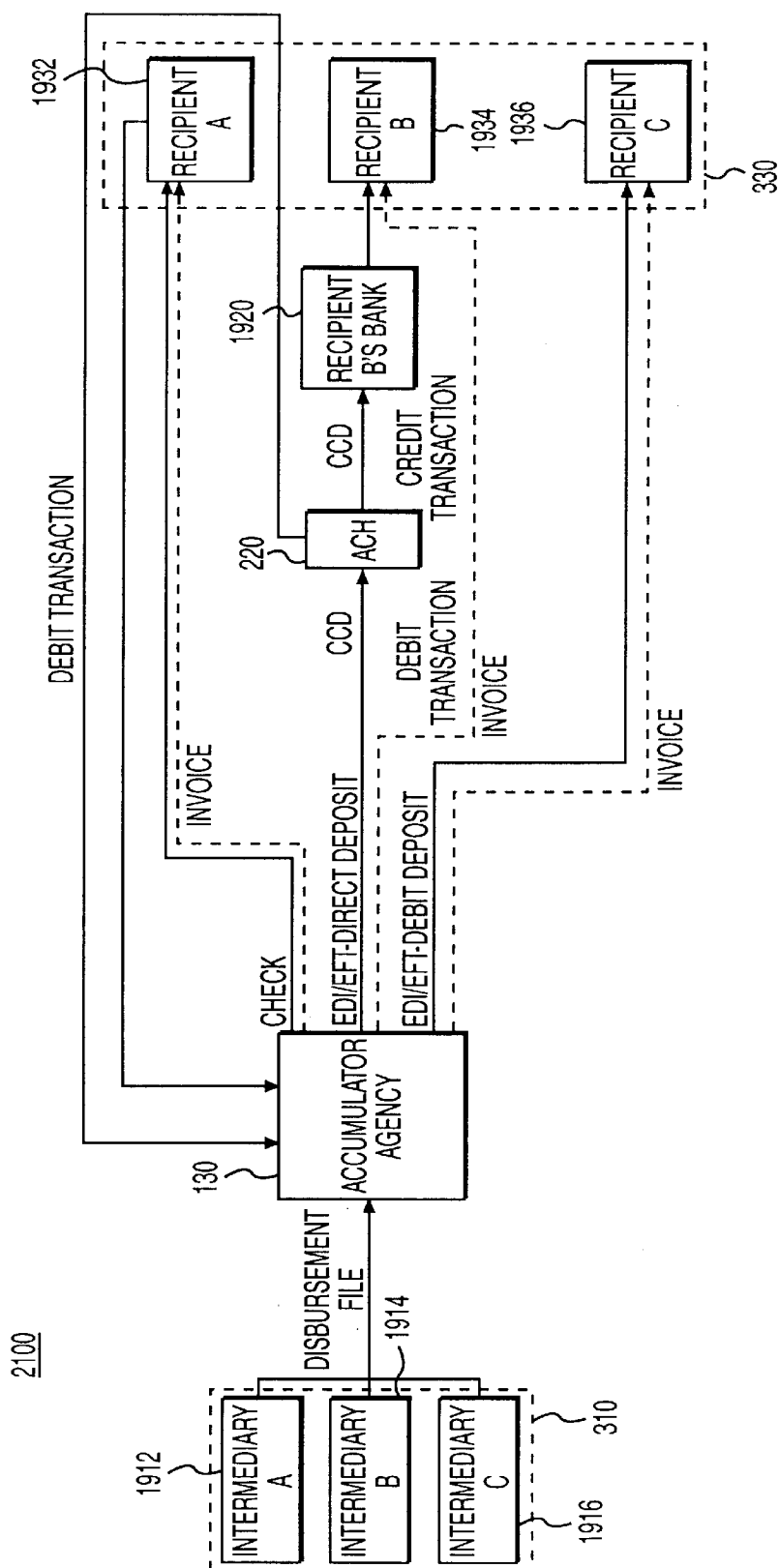


FIG. 21

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**METHOD AND APPARATUS FOR PAYMENT
PROCESSING USING DEBIT-BASED
ELECTRONIC FUNDS TRANSFER AND
DISBURSEMENT PROCESSING USING
ADDENDUM-BASED ELECTRONIC DATA
INTERCHANGE**

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to the processing of payments and disbursements. More particularly, the invention relates to a method and apparatus for processing payments using debit-based electronic funds transfer and processing disbursements using addendum-based electronic data interchange.

2. Description of the Related Art

If an employee owes a permissive or mandatory obligation to a third party, the employee has few options for making recurring payments through the employer. Presently, most employers do not have the capability to process payments and disbursements for an employee through their payroll systems. If an employee has a recurring permissive obligation, the employee may make payments on this obligation through the traditional means, such as, for example, payment by cash, payment by a check, or electronic payment through the employee's bank. Similarly, if an employee has a recurring mandatory obligation, such as, for example, a child support payment, an alimony payment, or other similar court-enforced mandatory obligations, the employee may also make payments on these obligations through the same traditional methods. In either of these situations, however, there are few options for an employee to make payments or disbursements through an employer.

For recurring mandatory obligations, one option is for an employer to withhold an amount from an employee's wages and to make subsequent disbursement of the amount to a particular receiving entity. This withholding generally occurs as a court-sanctioned withholding, such as a garnishment. For example, there are presently systems that allow the payment and disbursement of child support obligations from an employer directly into the bank account of a state's child support agency. One present system comprises computer software that allows an employer to extract data from any corporate financial application in order to process the obligation. The software then connects with an automated clearinghouse and processes an electronic payment for the obligation. The electronic transaction is a credit-based transaction. In a credit-based transaction, the automated clearinghouse issues a credit to the state agency based on the amount of the obligation. The bank for the state agency receives the credit and subsequently issues a debit against the bank account of the employer. The automated clearinghouse receives the debit from the bank of the state agency and processes the debit against the bank of the employer. When the amount of the obligation is satisfied through the automated clearinghouse, the credit held by the bank of the state agency is satisfied by the debit issued against the bank of the employer. Another present system performs similar operations, but the system functions only on its own proprietary software. These current methodologies for payment and disbursement processing are inefficient and undesirable based at least on three grounds.

First, the current methods for payment and disbursement processing require that employers use credit-based transactions. These transactions involve numerous interactions with an automated clearinghouse, which involve both financial

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and temporal inefficiencies. A credit-based transaction is financially inefficient because this type of transaction requires more interactions with an automated clearinghouse. Each time that a transaction passes through an automated clearinghouse, a processing fee is charged. Also, a credit-based transaction is temporally inefficient. Because a credit-based transaction must pass through an automated clearinghouse in multiple incantations, this type of transaction takes more time to complete.

Second, the current methods for payment and disbursement processing only allow the processing of one financial transaction at a time. This inefficiency results because the current methods use a payment format that is limited to one financial exchange per payment or disbursement transaction. For all electronic transactions with an automated clearinghouse, there are four available formats: cash concentration or disbursement (CCD), cash concentration or disbursement plus addenda (CCD+), corporate trade exchange (CTX), and corporate trade payments (CTP). The current systems utilize the CCD+ format, a combination of the CCD format and an addendum. The CCD+ format is limited to a single addenda record and is thus limited to one payment and disbursement per transaction. An addenda record enables the exchange of electronic payments as well as payment-related information through financial institutions over an automated clearinghouse network. In contrast, the CTX format allows one electronic payment to cover multiple obligations, therefore including up to 9,999 addenda records. The CTP format utilizes a distinct combination of addenda records, but the CTP format was discontinued effective April 1996. Therefore, because the current systems only utilize the CCD+ format, they can only process transactions one at a time.

In addition to these financial and temporal inefficiencies, the current methods also contain inherent structural inefficiencies. The current methods for payment and disbursement processing all require a bank both at the beginning and at the end of each financial transaction. Accordingly, these systems do not allow the employer to initiate a financial transaction to a recipient directly through an automated clearinghouse. Instead, the systems require that an employer initiate the financial transaction at a bank, that the bank process the financial transaction through an automated clearinghouse, and that the automated clearinghouse complete the transaction between the employer and the recipient. For the current systems, these processes include multiple transactions through the automated clearinghouse. These structural inefficiencies inure due to the inability of the employer to initiate or process electronic transactions through an automated clearinghouse.

The inefficiencies and other shortcomings in the current methodologies for payment and disbursement processing reflect undesirable diminutions in capacity and quality that could be achieved by further development of improved payment and disbursement processing methods. Thus, the current payment and processing methods reflect an unsatisfactory development of methods and systems to process both the permissive and mandatory obligations of an employee by an employer and subsequent disbursement to an intended recipient.

SUMMARY OF THE INVENTION

The present invention is directed to a method and system that obviates problems due to the limitations and disadvantages of the prior art.

It is an object of one embodiment of the invention to provide a system whereby a collector of funds may easily process a payment and a disbursement.

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It is another object of another embodiment of the invention to enable a collector to transmit an electronic payment and an addendum-based file to an accumulator agency for processing.

It is still another object of another embodiment of the invention to enable an accumulator agency to receive an electronic payment and to process a payment as a debit-based transaction.

It is yet another object of another embodiment of the invention to enable an accumulator agency to receive an addendum-based file and to process a disbursement based on the addendum information.

To achieve these and other objects, and in accordance with the purposes of the invention, as embodied and broadly described, one aspect of the invention includes a method of accumulating a payment and processing a disbursement. This method comprises initiating a payment with disbursement information from a payee to a payee through a collector; transferring to an accumulator agency the payment and the disbursement information from the collector; processing from the agency the payment as a debit transaction; and processing from the agency the disbursement information as an addendum transaction.

A further aspect of the invention includes a method of processing a payment. This method comprises receiving payment information at a collector; sending the payment information from the collector to an accumulator agency; receiving at the accumulator agency payment information from the collector regarding the payment; and initiating by the accumulator agency the payment as a debit transaction.

Another aspect of the invention includes a method of processing a disbursement. This method comprises transmitting by an accumulator agency disbursement information to an intermediary; receiving at the accumulator agency disbursement transaction information from the intermediary regarding authorization for a disbursement as an addendum transaction; and executing the disbursement to a recipient.

Additional aspects of the invention are disclosed and defined by the appended claims. It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings are included to provide a further understanding of the invention, are incorporated in and constitute a part of this specification, illustrate preferred embodiments of the invention, and, together with the description, serve to explain the principles of the invention.

In the drawings,

FIG. 1 is a block diagram of a payment and disbursement processing system;

FIG. 2 is a block diagram of a debit-based payment processing system in accordance with one embodiment of the present invention, as shown in FIG. 1;

FIG. 3 is a block diagram of an addendum-based disbursement processing system in accordance with one embodiment of the present invention, as shown in FIG. 1;

FIG. 4 is a block diagram of a payment and disbursement processing system, in accordance with a preferred embodiment of the present invention, as shown in FIG. 1;

FIG. 5 is a block diagram of a collector, as shown in FIG. 1;

FIG. 6 is a block diagram of an accumulator agency, as shown in FIG. 1;

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FIG. 7 is a block diagram of an intermediary/recipient, as shown in FIG. 2;

FIGS. 8A and 8B are samples of the contents of the financial electronic data interchange database and the electronic funds transfer database stored in the collector terminal shown in FIG. 5, the accumulator agency server shown in FIG. 6, and the intermediary/recipient terminal shown in FIG. 7;

FIGS. 9A and 9B are samples of the contents of the electronic data interchange addenda database stored in the collector terminal shown in FIG. 5, the accumulator agency server shown in FIG. 6, and the intermediary/recipient terminal shown in FIG. 7;

FIG. 10 is a block diagram of a payment processing system, in accordance with the preferred embodiment of the present invention, as shown in FIG. 4;

FIG. 11 is a flow diagram of a method for initiating a payment, in accordance with the embodiment of the invention, as shown in FIG. 10;

FIG. 12 is a flow diagram of a method for implementing payment processing, in accordance with the embodiment of the invention, as shown in FIG. 10;

FIG. 13 is a block diagram of a payment processing system, in accordance with an alternative embodiment of the present invention, as shown in FIG. 2;

FIG. 14 is a flow diagram for a method for initiating a payment, in accordance with the embodiment of the invention, as shown in FIG. 13;

FIG. 15 is a flow diagram for a method for implementing payment processing, in accordance with the embodiment of the invention, as shown in FIG. 13;

FIG. 16 is a block diagram for a payment processing system, in accordance with another alternative embodiment of the present invention, as shown in FIG. 2;

FIG. 17 is a block diagram for a disbursement processing system, in accordance with the preferred embodiment of the present invention, as shown in FIG. 4;

FIG. 18 is a flow diagram of a method for disbursement processing, in accordance with the embodiment of the invention shown in FIG. 17;

FIG. 19 is a block diagram of a disbursement processing system, in accordance with an alternative embodiment of the present invention, as shown in FIG. 3;

FIG. 20 is a flow diagram for a method of disbursement processing, in accordance with the embodiment of the invention shown in FIG. 19; and

FIG. 21 is a block diagram of a disbursement system, in accordance with another alternative embodiment of the present invention, as shown in FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Introduction

The system of a preferred embodiment of the invention avoids the inefficiencies and shortcomings of the prior art payment and disbursement methodologies by integrating the collection of payment and disbursement information by an employer and transmitting the information to an accumulator agency. The accumulator agency then processes the payment as a debit-based transaction and processes the disbursement as an addendum-based transaction. In this system, all parties benefit: the payor benefits by the availability of a simple method for payment and disbursement

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processing through an employer, the employer benefits by a fast and inexpensive method for transmitting payments and disbursements from an employee to a recipient, and the recipient benefits from the timely transmittal and receipt of a payment. The system is also beneficial to disbursement processors because the system allows for efficient transmittal of disbursement information without payment overhead.

A preferred system consistent with the invention comprises several components, including a collector, an accumulator agency, and an intermediary/recipient. From an initiator, the collector receives payment and disbursement information, which is initially stored at the collector. The collector maintains a database of payment and disbursement information pursuant to each initiator. The accumulator agency serves as a processing station between the collector and the recipient/intermediary. The accumulator agency receives the payment and disbursement information from the collector, verifies the validity of the information, and if valid, further processes the payment and disbursement. For payment processing, the accumulator agency transmits payments as debit-based transactions. For disbursement processing, the accumulator agency transmits disbursements as addendum-based transactions.

System

FIG. 1 shows a payment and disbursement system according to one embodiment of the present invention. System 100 includes initiator 110, collector 120, accumulator agency 130, debit-based payment processing 140, and addendum-based disbursement processing 150. Initiator 110, which is preferably an employee seeking to initiate a permissive payment and disbursement or an employee subject to a mandatory payment and disbursement, transacts with collector 120, which is preferably an employer. Collector 120 receives the payment and disbursement information from initiator 110, and collector 120 records the information in a database and transmits the information to accumulator agency 130. Accumulator agency 130 verifies and processes the payment and disbursement information. For payment processing, accumulator agency 130 transmits the payment according to debit-based payment processing 140. Debit-based payment processing 140 incorporates financial processing information. For disbursement processing, accumulator agency 130 transmits disbursement information according to addendum-based disbursement processing 150. Addendum-based disbursement processing 150 incorporates the non-financial information contained within the addendum.

FIG. 2 illustrates an embodiment of a debit-based payment processing system consistent with system 100 shown in FIG. 1. As shown in FIG. 2, debit-based payment processing system 200 includes collector 120, accumulator agency 130, accumulator agency's bank 210, automated clearing house (ACH) 220, collector's bank 230, intermediary/recipient's bank 240, and intermediary/recipient 250. As described in FIG. 1, collector 120 receives the payment and disbursement information, records the information in a database, and then transmits the information to accumulator agency 130. The transmission of this information occurs in the form of an addendum-based financial electronic data interchange (FEDI) file. Electronic data interchange (EDI) describes the computer to computer exchange of information from one entity to another using electronic communication, and electronic funds transfer (EFT) describes the exchange of an electronic payment using electronic communication. FEDI is a combination of an EDI disbursement information with an EFT electronic

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payment. Accumulator agency 130 receives the FEDI file, verifies the validity of the information in the file, and then records the information in a database. Following the validation of the FEDI file, accumulator agency 130 segregates the payment information and the disbursement information from the FEDI file. Accumulator agency 130 then sends the payment information to debit-based payment processing 140 and the disbursement information to addendum-based disbursement processing 150.

For the processing of the payment according to FIG. 2, accumulator-agency 130 transmits an EDI addendum to intermediary/recipient 250, with data indicating that a payment has been made. Also, accumulator agency 130 transmits an EFT transaction to accumulator agency's bank 210. Notably, accumulator agency 130 may transmit any number of EFT transactions to accumulator agency's bank 210 for processing. For example, if a payment is due to an intermediary/recipient from 500 entities, accumulator agency 130 may transmit all 500 payments as one EFT transaction to accumulator agency's bank 210 for processing. In so doing, accumulator agency 130 not only utilizes an efficient means of transmitting an EFT transaction but also saves transaction costs by using a single EFT transaction. For example, accumulator agency 130 could transmit this single EFT transaction containing 500 payments using the CTX format, which provides for up to 9,999 payments.

Once accumulator agency's bank 210 receives the EFT transaction from accumulator agency 130, accumulator agency's bank 210 must process each of the individual debit-based transactions contained within the EFT transaction. Like accumulator agency 130, accumulator agency's bank 210 may also use various EFT formats for processing multiple payments through ACH 220. ACH 220 is a clearing house for processing financial transactions through the Federal Reserve system, such as, for example, the National Automated Clearinghouse Association (NACHA).

Following transmission of the payment information to ACH 220, ACH 220 then processes the debit-based transactions initiated by accumulator agency's bank 210. Because these transactions are debit-based transactions, ACH 220 performs merely two transactions. First, ACH 220 issues a debit against the payor of the payment, and second, ACH 220 issues a credit to the recipient of the transaction. Thus, for the debit-based transactions initiated by accumulator agency's bank 210, ACH 220 initiates a debit transaction to collector's bank 230 and a credit transaction to intermediary/recipient's bank 240. Again, like collector 120 and accumulator agency 130, ACH 220 may utilize various EFT formats for multiple transmissions of these electronic transactions. Once ACH 220 has completed these transactions, payment processing has occurred, as intermediary/recipient 250 has received payment in intermediary/recipient's bank 240 from collector 120.

FIG. 3 illustrates an embodiment of an addendum-based disbursement processing system consistent with system 100 shown in FIG. 1. As shown in FIG. 3, addendum-based disbursement processing system 300 includes intermediary 310, accumulator agency 130, disbursement 320, paper check 322, direct deposit 324, debit deposit 326, and recipient 330. As described in FIG. 1, collector 120 receives payment and disbursement information from initiator 110, records the information in a database, and then transmits the information to accumulator agency 130. The transmission of payment and disbursement information occurs via a FEDI file. Once accumulator agency 130 receives the FEDI file, and following verification, accumulator agency 130 records the information in a database and segregates the payment

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and the disbursement from the FEDI file. Accumulator agency 130 then processes the disbursement information according to addendum-based disbursement processing 150.

For the processing of the disbursement according to FIG. 3, intermediary 310 initially receives an EDI file from accumulator agency 130, as shown in FIG. 2. This EDI file contains information relating to the payment made by initiator 110 and requests instructions regarding the disbursement. Intermediary 310 then processes the information and determines whether a disbursement is to be made. If a disbursement is approved by intermediary 310, intermediary 310 transmits another EDI file to accumulator agency 130 with instructions for the disbursement. Accumulator agency 130 then processes disbursement 320. Disbursement 320 may include any of a number of several disbursement methods, including paper check 322, direct deposit 324, and debit deposit 326. Accumulator agency 130 processes paper check 322 by the traditional methodology, by printing and mailing the check to recipient 330. Accumulator agency 130 processes direct deposit 324 also through the traditional methods, by issuing the deposit by EFT. Accumulator agency 130 processes debit deposit 326 through any number of available options by issuing an EFT, including the creation of a debit deposit at a bank operated by a state agency or the creation of a debit deposit account at a bank operated by accumulator agency 130. Whatever the methodology for disbursement, according to system 300, disbursement 320 processes a disbursement to recipient 330 according to instructions provided to accumulator agency 130 from intermediary 310.

FIG. 4 illustrates a preferred embodiment for a payment and disbursement system according to the present invention. System 400 depicts a payment and disbursement system for transmitting child support obligations from a non-custodial to a custodial parent through an employer. Of course, one skilled in the art will realize many alternative applications for this system.

As shown in FIG. 4, system 400 anticipates that initiator 110 (in the case of the preferred embodiment, an employee) has already initiated a payment and disbursement. System 400 thus shows three alternatives for collector 120 (shown here as employer 410) for initiating a payment and disbursement consistent with the invention. Employer 410 depicts alternative ways that an employer can initiate a payment and disbursement for an employee, illustrated as employer 412, employer 414, and employer 416. Employer 412 has only one employee subject to a child support obligations, employer 414 has 200 employees subject to child support obligations, and employer 416 also has 200 employees subject to child support obligations. In the case of employer 412, the FEDI file transmitted from employer 412 to accumulator agency 130 comprises the CCD+ format. As noted above, the CCD+ format provides for an EFT transaction plus an addendum, but the CCD+ format is limited to one addendum per transaction. Thus, employer 414 also utilizes the CCD+ format, but due to the limitations of this EFT format, employer 414 would be required to use 200 separate FEDI transactions in the CCD+ format. In contrast, employer 416 transmits all 200 transactions utilizing the CTX format. As noted above, the CTX format allows for the transmission of a payment with up to 9,999 addenda records. Employer 416 therefore saves both time and expense by using the CTX format. Whatever the format, once employer 410 transmits the necessary FEDI files, accumulator agency 130 receives the FEDI files from employer 410 and processes the payment and disbursement transactions.

For payment processing according to system 400, accumulator agency 130 transmits an EDI transaction to state

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460 and an EFT transaction to accumulator agency's bank 210. The EDI transaction from accumulator agency 130 to state 460 indicates that a payment has been made. The EFT (or FEDI) transaction from accumulator agency 130 to accumulator agency's bank 210 contains the payment information to initiate a payment from initiator 110 (that is, a non-custodial parent) to recipient 330 (that is, custodial parent 480). As depicted in system 400, state 460 comprises state A 462, state B 464 and state C 466. System 400 contains three representations of state 460 for purposes of describing three alternatives for payment and disbursement processing. For similar reasons, system 400 contains three representations of state bank 470, including state A's bank 472, state B's bank 474, and state C's bank 476, and accordingly, system 400 contains three representations of custodial parent 480, including custodial parent A 482, custodial parent B 484, and custodial parent C 486.

Continuing with payment processing according to system 400, accumulator agency's bank 210 receives the payment information from accumulator agency 130 and processes the payment via ACH 220 as a debit-based transaction. In processing the debit-based transaction, ACH 220 issues a debit against employer's bank 440 and issues a credit to state bank 470. In this manner, the payment is completed from initiator 110, or the non-custodial parent, to state 460 via employer 410 for the benefit of recipient 330, or custodial parent 480. The particular steps associated with the processes of payment processing are described in connection of FIGS. 10-16.

For disbursement processing according to system 400, state 460 issues an EDI transaction to accumulator agency 130, authorizing a disbursement to custodial parent 480. Accumulator agency 130 then processes the disbursement 320 according to one of three methods, paper check 322, direct deposit 324, or debit deposit 326. As shown in FIG. 4, for a disbursement by paper check, state A 462 transmits an EDI file to accumulator agency 130, authorizing a disbursement to custodial parent A 482. Accumulator agency 130 then prints and issues a check directly to custodial parent A 482. For a disbursement by direct deposit, state B 464 issues an EDI file to accumulator agency 130, authorizing a disbursement to custodial parent B 484. Accumulator agency 130 then issues an EFT transaction to accumulator agency's bank 210, authorizing a direct deposit to custodial parent B 484. Accumulator agency's bank 210 issues an EFT transaction to ACH 220, initiating a direct deposit to custodial parent B 484. Based on this instruction for a direct deposit, ACH 220 issues a debit transaction against state B's bank 474 and issues a credit transaction to custodial parent B's bank 490, for the benefit of custodial parent B 484. For a disbursement by debit deposit, state C transmits an EDI to accumulator agency 130, authorizing a debit deposit to custodial parent C 486. Accumulator agency 130 transmits an EFT transaction to accumulator agency's bank 210, authorizing the creation of a debit deposit account to the benefit of custodial parent C 486. Accumulator agency's bank 210 issues an EFT transaction to ACH 220, providing for the creation of a debit deposit in state C's bank 476. Once a debit deposit is created in state C's bank 476, custodial parent C 486 may access the account and receive the disbursement. The particular steps associated with the processes of disbursement processing are described in connection with FIGS. 17-21.

In the payment and disbursement system described in FIG. 4, it should be noted that all the designations are exemplary. One skilled in the art would be able to recognize various implementations of system 400. For example, the

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reference to a state does not limit the scope of this invention to a state of the United States, but in the context of the preferred embodiment, the reference may apply to any local, regional, federal, or international governmental entity. In other embodiments, moreover, the reference to a state could even apply to a nongovernmental entity, such as, for example, a mutual fund, a bill payment center, or any other commercial entity. Indeed, all the designations in system 400 entail such broad applications in the context of payment and disbursement processing.

FIG. 5 illustrates one embodiment of collector 120 used in system 100 shown in FIG. 1. As shown in FIG. 5, collector 120 preferably includes collector terminal 500 equipped with conventional hardware, including central processing unit (CPU) 510, random access memory (RAM) 512, display memory 514, video interface circuit (VIC) 516, input/output controller (I/O) 518, data storage device (disk) 520, input device 530, display 540, external device 550, and optional network interface 560. Collector terminal 500 basically functions as a conventional data processor.

As shown in FIG. 5, CPU 510 is directly coupled to each of the other elements of collector terminal 500. CPU 510 executes program code (not shown) stored in one or more RAM 512 or disk 520 to carry out the functions and acts described in connection with collector terminal 500. CPU 510 preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as accumulation of a payment and disbursement, transmission of a payment and disbursement, and the processing and completion of a payment and disbursement. The processes performed by these modules are described in connection with FIGS. 10–21. CPU 510 interacts with RAM 512 and disk 520 to execute stored program code according to conventional data processing techniques.

As also shown in FIG. 5, input device 530 permits collector terminal 500 to receive payment and disbursement information about initiator 110 and, although shown as a single device, may comprise one or more data input devices of various types, such as an alphanumeric keyboard, a numeric keypad, a bar code scanner, a credit card reader, a disk drive, a memory, an electronic communication line, and a wireless transceiver. Input device 530 preferably transmits received information to CPU 510 for storage in disk 520. VIC 516 comprises a video driver sending signals to display 540 displaying either text or graphics based on the contents of display memory 514. Display 540 is preferably large enough to display information relating to payment and disbursement processing for initiators 110. External device 550 allows operability of other components with collector 120, such as, for example, a modem, a printer, a scanner, a photocopying device, or any other form of input or output device. Optional network interface 560 links CPU 510 to allow communication with other collector devices, such as multiple collector terminals 500.

As shown in FIG. 5, disk 520 preferably comprises a large capacity memory capable of maintaining FEDI file database 522 and EDI addenda database 524. FEDI file database 522 contains data pertaining to payment and disbursement information accumulated from initiators 110. The contents of FEDI file database 522 are transmitted to accumulator agency 130 for processing. EDI addenda database 524 contains the disbursement information from FEDI file database 522. Data contained in one or more of these databases 522 and 524 may be periodically updated from collectors 120 via input device 530, external device 550, or optional network interface 560. Samples of the records and their respective fields contained in databases 522 and 524 are shown in and described in connection with FIGS. 8A–8B and 9A–9B.

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FIG. 6 illustrates one embodiment of accumulator agency 130 used in system 100 shown in FIG. 1. Accumulator agency 130 preferably comprises accumulator agency server 600 equipped with conventional hardware, including CPU 610, RAM 612, display memory 614, VIC 616, I/O 618, disk 620, input device 630, display 640, external device 650, and optional network interface 660. In general, elements of accumulator agency server 600 common to collector terminal 500 preferably operate in substantially the same manner as described above. Because accumulator agency server 600 may service one or more external devices 650, accumulator agency server 600 is preferably capable of interfacing with one or more collector terminals 500. Alternatively, accumulator agency server 600 130 may also interface with one or more collector terminals 500 via optional network interface 660.

As shown in FIG. 6, disk 620 preferably comprises a large capacity memory capable of maintaining FEDI file database 622, EFT debit database 624, and EDI addenda database 626. FEDI file database 622 contains data pertaining to the payment and disbursement information transmitted by collector terminals 500. Indeed, FEDI file database 622 contains data corresponding to FEDI file database 522. EFT debit database 624 contains the payment information from FEDI file database 622. EDI addenda database 626 contains the disbursement information from FEDI file database 622. Data contained in one or more of these databases 622, 624, and 626 may be periodically obtained and updated from collector terminals 500 via external device 650 or optional network interface 660. Samples of the records and their respective fields contained in databases 622, 624, and 626 are shown in and described in connection with FIGS. 8A–8B and 9A and 9B.

FIG. 7 illustrates one embodiment of intermediary/recipient 250 used in system 200 shown in FIG. 2. Intermediary/recipient 250 preferably comprises intermediary/recipient terminal 700 equipped with conventional hardware, including CPU 710, RAM 712, display memory 714, VIC 716, I/O 718, disk 720, input device 730, display 740, external device 750, and optional network interface 760. Again, elements of intermediary/recipient terminal 700 common to collector terminal 500 or accumulator agency server 600 preferably operate in substantially the same manner as described above. External device 750 or optional network interface 760 allows connectivity of intermediary/recipient terminal 700 to external computers or networks. In a preferred embodiment, one such external computer is accumulator agency server 600.

As shown in FIG. 7, disk 720 maintains EDI addenda database 721, EFT credit database 723, disbursement database 725, initiator database 727, and recipient database 729. EDI addenda database 721 contains the addendum information transmitted by accumulator agency server 600. Indeed, EDI addenda database 721 contains data corresponding to EDI addenda database 626. EFT credit database 723 contains the credit transactions transmitted from ACH 220. Disbursement database 725 contains information designating whether a disbursement will be authorized and transmitted to accumulator agency server 600. Initiator database 727 contains a listing of authorized initiators for payment transactions. Recipient database 729 contains a listing of the authorized recipients for the receipt of disbursements. Samples of the records and their respective fields contained in databases 721, 723, 725, 727, and 729 are shown in and described in connection with FIGS. 8A–8B and 9A–9B.

Database Formats

Samples of the contents of FEDI file database 522, EDI addenda database 524, FEDI file database 622, EFT debit

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database 624, EDI addenda database 626, EDI addenda database 721, EFT credit database 723, disbursement database 725, initiator database 727, and recipient database 729 are shown in FIGS. 8A–8B and 9A–9B. The specific data and fields illustrated in these figures represent only one embodiment of the records stored in the databases consistent with the invention. In most cases, the fields shown in FIGS. 8A–8B and 9A–9B are relatively straight forward and self-explanatory. In addition to the disclosed databases, the data and fields of these databases, as well as the number of databases, can be readily modified from the described embodiments, for example, to include more or fewer data fields.

FEDI file database 522 maintained in collector terminal 500 contains a listing of information relating to payments and disbursements for use by collector terminal 500. FIGS. 8A and 8B illustrate a sample of the contents of FEDI file database 522, with FIG. 8A depicting a sample of the contents of a FEDI file in the CCD format and FIG. 8B depicting a sample of a FEDI file in the CTX format.

As shown in FIG. 8A, using the CCD format, FEDI file database 522 contains eleven fields with data element names corresponding to, for example, record type code, transaction code, receiving depository financial institution (DFI) identification, check digit, DFI account number, amount, identification number, receiving company name, discretionary data, addenda record indicator, and trace number. FIG. 8A also indicates the attributes of each field. After the field row and the data element name row, the field inclusion requirement row indicates the requirements for each of the eleven fields, “M” indicating a mandatory element, “R” indicating a required element, and “O” indicating an optional element. The contents row indicates a sample stricture for the contents of each field, and the link row indicates the length of characters available for each field. Finally, the position row indicates the position of the data element in the database record. The CCD format allows a database record of 94 characters.

For field 1, located at position 01-01, record type code allows a single character, which the example shows as a “6.”

For field 2, located at position 02-03, transaction code encompasses two characters, which the example shows as requiring a numeric form.

For field 3, located at position 04-11, receiving DFI identification provides for 8 characters, which the example depicts in the form, “TTTTAAAA.”

For field 4, located at position 12-12, check digit encompasses a single character, which the example shows as requiring a numeric form.

For field 5, located at position 13-39, DFI account number entails 17 characters, which the example shows as allowing any alphanumeric form.

For field 6, located at position 30-39, amount provides for a character length of 10, which the example shows as \$\$\$\$\$\$¢ (thus, allowing a numerical entry of 999,999.99 or below).

For field 7, located at position 40-54, identification number spans 15 characters, which the example shows as allowing any alphanumeric form.

For field 8, located at position 55-76, receiving company name encompasses 22 characters, which the example shows as allowing any alphanumeric form.

For field 9, located at position 77-76, discretionary data involves only 2 characters, which the example shows as allowing any alphanumeric form.

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For field 10, located at position 79-79, addenda record indicator allows a single character, which the example shows as requiring a numeric form.

For field 11, located at position 80-94, trace number encompasses a number of up to 15 characters, which the example shows as requiring a numeric form.

As shown in FIG. 8B, using the CTX format, FEDI file database 522 may also contain thirteen fields with data element names corresponding to, for example, record type code, transaction code, receiving DFI identification, check digit, DFI account number, total amount, identification number, number of addenda records, receiving company name/ID number, reserved, discretionary data, addenda record indicator, and trace number. The CTX format also allows a database record of 94 characters. Indeed, the 13 fields of FIG. 8B correspond to the fields described in FIG. 8A, except that FIG. 8B contains two additional fields, namely, number of addenda records (field 8) and reserved (field 10). For field 8, located at position 55-58 of the addenda for the CTX format, number of addenda records encompasses 4 characters, which the example shows as requiring a numeric form; for field 10, located at position 75-76 of the addenda for the CTX format, reserved provides for 2 characters, which the example indicates as “blank” due to the reserved status of this field. Otherwise, the fields of the CTX format correspond exactly to the fields of the CCD format. Indeed, both the CTX format and the CCD format contain 94 characters. Accordingly, FEDI file database 522 contains fields corresponding to either the CCD or CTX format, and in either case, the number of characters in the database for each record does not exceed 94.

Notably, FIGS. 8A and 8B only depict the fields for the EFT-portion of the FEDI file. Accordingly, these fields for the CCD and CTX formats operate according to the Operating Rules and Guidelines of the National Automated Clearinghouse Association (NACHA), hereby incorporated by reference.

Also maintained in collector terminal 500, EDI addenda database 524 contains a listing of the information relating to disbursements either authorized by or required from initiators 110. As shown in FIGS. 8A and 8B, the addenda record indicator (field 10 for CCD, field 12 for CTX) designates the presence or absence of an addenda record in an FEDI file. If this flag is positive, FIG. 9A illustrates a sample of the contents of such an addenda record. As shown in FIG. 9A, an addenda record contains five fields with data element names corresponding to, for example, record type code, addenda type code, payment related information, addenda sequence number, and entry detail sequence number. The row structure of the addenda record depicted in FIG. 9A corresponds to the structure and contents of the rows in FIGS. 8A–8B. Of the five fields shown in FIG. 9A, payment related information (field 3) contains the pertinent disbursement information, in the context of EDI addenda database 524.

FIG. 9B illustrates a sample of the contents of EDI addenda database 524, in its preferred implementation of a payment and disbursement processing system for child support payments. As shown in FIG. 9B, EDI addenda database 524 contains records having fields with segment identifiers for deductions (DED) corresponding to, for example, application identifier DED01, case identifier DED02, pay date DED03, payment amount DED04, non-custodial parent social security number DED05, medical support indicator DED06, non-custodial parent name DED07, FIPS code DED08, an employment termination

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indicator DED09. Therefore, as shown in FIG. 9B, the addenda record for a child support payment contains nine segment identifiers.

Application identifier DED01 indicates the type of deduction being withheld from an employee's pay.

Case identifier DED02 is the case number or court order number that the child support receiving agency uses for the processing of payments and disbursements.

Pay date DED03 indicates the pay date or the date of income withholding from the non-custodial parent.

Payment amount DED04 indicates the amount of withholding from the pay of the non-custodial parent, which is paid to the child support receiving agency.

Non-custodial parent social security number DED05 provides the child support receiving agency with the social security number of the non-custodial parent.

Medical support indicator DED06 indicates whether the non-custodial parent has family medical insurance available through his or her employer.

Non-custodial parent name DED07 indicates the first seven letters of the last name of the non-custodial parent followed by at least three of the first three letters of his or her first name.

Federal information process standard (FIPS) code DED08 refers to the code used by the child support entity receiving the transaction, usually indicating the state and county of the child support entity.

Employment termination indicator DED09 is used to indicate to the child support enforcement agency that the non-custodial parent's employment has been terminated.

For the contents of an EDI addendum for child support payment and disbursement, FIG. 9B also indicates the mandatory and permissive attributes of each field. Attribute column 1 indicates the field requirement, "M" indicating a mandatory element and "O" indicating an optional element. Attribute column 2 indicates the data type, including "AN" for string type data, "DT" for date type data, "ID" for identifier data from a predefined list of values, and "N2" indicating a numeric type data with two decimal places to the right of a fixed decimal point (indicating a financial amount). Attribute column 3 indicates the minimum/maximum allowable length for the element, for example, 1/20 indicates a minimum of one character and a maximum of 20 characters.

Of course, the example of the addenda requirements for a child support payment and disbursement are only one implementation of a system consistent with the present invention. Other implementations for payment and disbursement processing may also be used, such as, for example, alimony payments, payments on a judgment, payments on an attachment, tax payments, or even permissive payments, such as, for example, payments for investments or a mutual fund, payments upon a loan, or any other form of private or commercial obligation.

FEDI file database 622 maintained in accumulator agency server 600 contains a listing of information corresponding to FEDI file database 522. FEDI file database 622 contains those FEDI files transmitted to accumulator agency server 600 by collector terminals 500. Following transmission of these FEDI files, accumulator agency server 600 then validates the information, and if valid, segregates the EFT information from the EDI information. EFT debit database 624 contains the EFT information obtained from FEDI file database 622, and EDI addenda database 626 contains the EDI information obtained from FEDI file database 622. As

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described above, FIGS. 8A and 8B show samples of EFT information, and FIGS. 9A and 9B show samples of EDI information. EFT debit database 624 and EDI addenda database 626 contain information consistent with that shown in and described in connection with FIGS. 8A-8B and 9A-9B.

EDI addenda database 721 maintained in intermediary/recipient terminals 700 contains a listing of disbursement information corresponding to the EDI information transmitted to intermediary/recipient terminal 700 from accumulator agency server 600, which was transmitted to accumulator agency server 600 from collector terminals 500. EDI addenda database 721 contains information similar to that contained within EDI addenda database 524 and EDI addenda database 626. FIGS. 9A and 9B show samples of EDI information. Intermediary/recipient terminal 700 receives EDI transactions into EDI addenda database 721 from accumulator agency server 600 in order to process disbursements according to the information contained within the EDI addenda.

EFT credit database 723 maintained in intermediary/recipient terminal 700 contains information relating to payments processed through accumulator agency's bank 210 and ACH 220 for the purpose of later distribution and processing. In an implementation pertaining to child support, once initiator 110, or a non-custodial parent, has issued a payment through employer 410 to custodial parent 480, EFT credit database 723 indicates to intermediary/recipient terminal 700 (such as a terminal at a state child support agency) that the non-custodial parent has paid the obligation. Once the payment has occurred, intermediary/recipient terminal 700 may then authorize the disbursement to custodial parent 480.

Disbursement database 725, initiator database 727, and recipient database 729 maintained in intermediary/recipient terminal 700 enable authorization of disbursements pursuant to the information contained within EDI addenda database 721. Initiator database 727 contains a listing of the authorized initiators for payment processing, recipient database 729 contains a listing of the authorized recipients for disbursement processing, and disbursement database 729 contains a listing of disbursements authorized for processing. EFT credit database 723 thus indicates to disbursement database 725 whether a disbursement is authorized. Once a disbursement is authorized under disbursement database 725, intermediary/recipient terminal 700 transmits such authorization to accumulator agency server 600. Disbursement database 725 may also contain a historical database of prior disbursements. In an implementation pertaining to child support, for example, initiator database 727 would contain a listing of initiators 110, or non-custodial parents, recipient database 729 would contain a listing of custodial parents 480, and disbursement database 729 would contain the information regarding payments due by the non-custodial parents to custodial parents for child support obligations.

Process

In processing a payment and disbursement from collector 120 (such as an employer) based on an obligation of initiator 110 (such as an employee), the system shown and described in connection with FIG. 1 preferably executes several distinct modules, or processes. These processes include facilitating the accumulation of a payment and disbursement at collector 120 from initiator 110, transmitting the payment and disbursement information from collector 120 to accu-

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mulator agency **130**, processing the payment via debit-based payment processing **140**, and processing the disbursement via addendum-based disbursement processing **150**. The steps associated with these processes are described in connection with FIGS. **10–21** and can be performed in any order, unless otherwise specified or dictated by the steps themselves.

In describing the processes consistent with the invention, various implementations of systems consistent with the invention are also described herein. For example, FIG. **10** illustrates a payment processing system consistent with the preferred embodiment of the invention as shown in FIG. **4**. FIGS. **11** and **12** depict flow diagrams illustrating the series of steps performed by system **1000** as shown in FIG. **10**. In initiating payment processing pursuant to the preferred embodiment, employer **410** (shown here as employers **412**, **414**, **416**) receives a withholding order from initiator **110** (here, a non-custodial parent/employee), authorizing employer **410** to withhold funds from salary regarding a child support obligation (step **1110**). If employer **410** receives a withholding order, the order will involve either a wage assignment income withholding or wage lien from a state agency or court ordering the withholding of funds from the salary of an employee pursuant to a child support obligation. Alternatively, an employee can also authorize an employer to withhold funds from his or her salary for a child support obligation. Whatever the form of authorization, once authorized, the employer converts the withholding obligation into a FEDI file (step **1120**). This FEDI file may contain a payment with addendum information regarding disbursement in either the CCD or CTX formats. The FEDI file preferably is in the CTX format for greater efficiency and cost savings. Following the creation of the FEDI file, the employer then transmits the FEDI file to accumulator agency **130** (step **1130**).

Once accumulator agency **130** receives the FEDI file from employer **410** (step **1202**), accumulator agency **130** validates the FEDI transmission (step **1205**). The validation of the FEDI transmission may include certification of the employer. In this certification process, accumulator agency **130** determines whether employer **410**, which transmitted the FEDI file, is registered with accumulator agency **130**. If employer **410** is not registered with accumulator agency **130**, the FEDI file is rejected (step **1210**). If employer **410** is registered with accumulator agency **130**, employer **410** is certified and processing of the FEDI file continues. Note that this certification step is only one of many possible certification steps pursuant to methods consistent with the invention. Other certification steps may include, for example, validation of the data contained within the FEDI file.

Following certification of the employer, accumulator agency **130** initiates two transmissions. On the one hand, accumulator agency **130** sends an EDI file to state **460** (shown here as state A **462**, state B **464**, and state C **466**) (step **1220**). This EDI file indicates to state **460** that a payment has been made by initiator **110** (or, an employee) via employer **410**. Once state **460** receives the EDI file, state **460** uses the information contained within the addendum and updates its records pertaining to the payment by the employee (step **1230**). On the other hand, accumulator agency **130** also periodically accumulates EFT files for subsequent transmission (step **1240**). Accumulator agency **130** preferably transmits EFT files by the use of a FEDI file. For example, using the CTX format, accumulator agency **130** can accumulate 9,999 EFT payment transactions for transmissions in a single FEDI file. Once accumulator agency **130** has created such a FEDI file, the file is transmitted to accumulator agency's bank **210** (step **1250**).

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Upon receipt of the FEDI file from accumulator agency **130**, accumulator agency's bank **210** processes the payment transactions (step **1260**). If accumulator agency **130** transmitted a FEDI file, accumulator agency's bank **210** segregates and processes the payments, but if accumulator agency **130** transmitted a single EFT file, then accumulator agency's bank **210** simply processes the single payment transaction. Once accumulator agency's bank **210** has accumulated and processed the payment transactions received from accumulator agency **130**, accumulator agency's bank **210** then interacts with ACH **220**. As done by accumulator agency **130**, accumulator agency's bank **210** may also utilize FEDI when transacting with ACH **220**. Thus, accumulator agency's bank may periodically accumulate and transmit payment transactions in the form of a FEDI file in the CTX format to ACH **220**.

Once ACH **220** receives the payment transaction information from accumulator agency's bank **210**, ACH **220** processes the payments as debit-based transactions. Accordingly, ACH **220** processes the payments as debit-based transactions by transmitting a debit transaction to employer's bank **440** (step **1280**) and transmitting a credit transaction to state bank **470** (step **1270**), such as, state A's bank **472**, state B's bank **474**, and state C's bank **476**. Following the processing of these transactions by ACH **220**, the payment obligation from employer's bank **440** is satisfied with regard to state **460**, for example, including state **463**, state **464** and state **466**.

Although the system and processes described by FIGS. **10–12** describe the preferred embodiment for the payment processing system shown in FIG. **4**, other implementations are also available. FIG. **13**, for example, illustrates an alternative embodiment for a payment processing system consistent with the invention. FIGS. **14–15** depict flow diagrams illustrating the series of steps performed by system **1300** as shown in FIG. **13**. Similar to system **1000** in FIG. **10** and the processes described in FIGS. **11–12**, system **1300** allows collectors **120** (shown here as collector **1312**, collector **1314**, and collector **1316**) to transmit payment information to accumulator agency **130** in alternative methods (step **1410**). In contrast to the system and methods described in FIGS. **10–12**, the system and methods consistent with this embodiment do not limit collector **120** to an employer. Otherwise, system **1300** and the associated methods operate similarly as system **1000** and its associated methods. Collectors **120** create a FEDI file (step **1420**) and transmit the FEDI file to accumulator agency **130** (step **1430**). Accumulator agency **130** then receives the FEDI file from collectors **120** (step **1502**) and performs certification (step **1505**).

If certification fails, the FEDI file is rejected (step **1510**). If certification passes, accumulator agency **130** performs two steps. First, accumulator agency **130** sends an EDI file to intermediary/recipient **250** (step **1520**). Upon receipt of the EDI file, intermediary/recipient **250** updates its records regarding the payment described in the EDI file (step **1530**). In contrast to the system and methods described in FIGS. **10–12**, the system and methods consistent with this embodiment do not limit intermediary/recipient **250** to a state. However, to show that payment transaction can be processed to multiple recipients, system **1300** distinguishes intermediary/recipients **1322**, **1324**, **1326**. Second, accumulator agency accumulates EFT files from the FEDI files received from collectors **120** and periodically creates combined FEDI files for later transmission (step **1540**). Accumulator agency **130** then transmits the FEDI file to accumulator agency's bank **210** (step **1550**). Accumulator agency's bank **220** then receives the FEDI file from accu-

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mulator agency 130 and processes the payment as a debit-based transaction via ACH 220 (step 1560). ACH 220 subsequently performs two transactions: ACH 220 processes a debit transaction to collector's bank 1310 (step 1580) and transmits a credit transaction to intermediary/recipient's bank 240, here designated as intermediary/recipient A's bank 1332, intermediary/recipient B's bank 1334, and intermediary/recipient C's bank 1336 (step 1570). Following these transactions, the payment obligation from intermediary/recipient's bank 240 is satisfied with regard to intermediary/recipient 250, for example, including intermediary/recipient A 1322, intermediary/recipient B 1324, and intermediary/recipient C 1326.

As described above, the system and methods associated with FIGS. 13–15 provide for a more dynamic payment processing system than the system and methods associated with FIGS. 10–12. The system and methods consistent herewith allow for payment processing of mandatory as well as permissive obligations. Also, the system and methods consistent herewith allow for payment processing from entities other than non-custodial parents, through entities other than states, and to entities other than custodial parents.

FIG. 16 illustrates another alternative embodiment for a payment processing system consistent with the invention. Similar to system 1300, described in FIG. 13, system 1600 operates in the same manner as the system and methods disclosed in FIGS. 13–15, except system 1600 allows accumulator agency 130 to transact directly with ACH 220. In short, system 1600 allows accumulator agency 130 to function as a bank.

In system 1600, collectors 120 (here shown as collector 1312, collector 1314, and collector 1316) transmits payment information to accumulator agency 130. Once accumulator agency 130 receives the FEDI file from collectors 120, following certification, accumulator agency 130 then sends an EDI file to intermediary/recipient 250, and accumulator agency 130 sends an FEDI file to a ACH 220. Notably, in contrast to the system and methods described by FIGS. 10–15, the system and methods consistent with FIG. 16 allow accumulator agency 130 to transact directly with ACH 220. In this manner, accumulator agency 130 functions as a bank. Following the transactions between ACH 220 and accumulator agency 130, ACH 220 processes the payments as debit-based transactions. In so doing, ACH 220 processes a debit transaction to collector's bank 1310 and transmits a credit transaction to intermediary/recipient's bank 240. Like the system and methods consistent with the embodiment of the invention associated with FIGS. 13–15, the system and methods consistent with FIG. 16 also provide for a more dynamic payment processing system. By allowing accumulator agency 130 to transact directly with ACH 220, transaction steps are omitted that allow for a more efficient and thus timely processing of payments. Of course, the omission of this one step includes but one of many changes that can be made to the systems and methods for payment processing consistent with the invention.

FIG. 17 illustrates a disbursement processing system consistent with the preferred embodiment of the invention as shown in FIG. 4. FIG. 18 depicts a flow diagram illustrating the series of steps performed by system 1700 as shown in FIG. 17. In transacting disbursement processing pursuant to the preferred embodiment, state 460 (here shown as state A 462, state B 464, and state C 466) computes the child support disbursement due to recipient 330 and transmits the disbursement information in an EDI file to accumulator agency 130 (step 1810). Accumulator agency 130 receives the EDI file from state 460 and processes the disbursement

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(step 1820). If the disbursement is a check (step 1825), accumulator agency 130 prints the check and transmits it directly to custodial parent 480 (step 1830). In system 1700, the issuance of a check by accumulator agency 130 is transmitted to custodial parent A 482. The issued check is drawn on the bank account of state 460. In system 1700, the check issued by accumulator agency 130 to custodial parent A 482 is drawn on state A's bank 472 (step 1835).

If the disbursement is not a check, accumulator agency 130 must process an electronic transaction for the disbursement (step 1840). To do so, accumulator agency 130 issues an EFT/FEDI transaction to accumulator agency's bank 210 (step 1842) and accumulator agency's bank then transmits the transaction to ACH 220 (step 1845). ACH 220 then transmits the EFT/FEDI transaction to state bank 470 (step 1850). If the EFT/FEDI transaction is for a direct deposit (step 1855), state bank 470 subsequently issues a direct deposit via ACH 220 (step 1860). In system 1700, the issuance of a direct deposit by accumulator agency 130 results in the transmission of a direct deposit to ACH 220. ACH 220 then processes the direct deposit to custodial parent B's bank 490. In so doing, ACH 220 issues a debit transaction to state B's bank 474 (step 1866) and issues a credit transaction to custodial parent B's bank 490 (step 1867). Thereby, custodial parent B 484 receives a disbursement in the form of a direct deposit (step 1868).

If disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit (step 1870). In establishing a debit deposit, accumulator agency 130 has the option of where to locate the debit deposit account. In system 1700, accumulator agency 130 establishes the direct deposit account at state C's bank 476, by transmitting the debit deposit information via ACH 220. Thereby, custodial parent C 486 receives the disbursement in the form of a debit account at state C's bank 476 (step 1880). Alternatively, accumulator agency 130 can also establish a debit deposit account at accumulator agency's bank 210. Additionally, although not depicted in FIG. 18, the system and methods consistent with the preferred embodiment also contemplate the issuance of an invoice to custodial parent 480 for any disbursement (as indicated by the dotted line on FIG. 17).

Although the system and processes described by FIGS. 17–18 describe the preferred embodiment for the disbursement processing system shown in FIG. 4, other implementations are also available. FIG. 19, for example, illustrates an alternative embodiment for a disbursement processing system consistent with the invention. FIG. 20 depicts a flow diagram illustrating the series of steps performed by system 1900 as shown in FIG. 19. Similar to system 1700 in FIG. 17 and the processes described in FIG. 18, system 1900 enables intermediary 310 to compute a payment due to recipient 330 and to transmit the disbursement information in an EDI file to accumulator agency 130 (step 2010). In contrast to the system and methods described in FIGS. 17–18, the system and methods consistent with this embodiment do not limit intermediary 310 to a state. Otherwise, system 1900 and the associated methods operate similarly as system 1700 and its associated methods. Accumulator agency 130 receives the EDI file from intermediary 310 and processes the disbursement (step 2020). If the disbursement is a check (step 2025), accumulator agency 130 prints the check and transmits it directly to recipient 330 (step 2030). Again, in contrast to the system and methods described in FIGS. 17–18, the system and methods consistent with this embodiment do not limit recipient 330 to a custodial parent. However, to show that multiple disbursement transaction

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can be processed to multiple recipients, system 1900 distinguishes recipient A 1932, recipient B 1934, and recipient C 1936. As indicated in system 1900, the issuance of a check by accumulator agency 130 is transmitted to recipient A 1932. The issued check is drawn on the bank account of intermediary A's bank 1912. In system 1900, the check issued by accumulator agency 130 recipient A 1932 is drawn on intermediary A's bank 1912 (step 2035).

If the disbursement is not a check, accumulator agency 130 must process an electronic transaction for the disbursement (step 2040). To do so, accumulator agency 130 issues an EFT/FEDI transaction to accumulator agency's bank 210 (step 2042) and accumulator agency's bank then transmits the transaction to ACH 220 (step 2045). ACH 220 then transmits the EFT/FEDI transaction to intermediary/recipient's bank 240 (step 2050). If the EFT/FEDI transaction is for direct deposit (step 2055), intermediary/recipient bank 240 subsequently issues a direct deposit via ACH 220 (step 2060). In system 1900, accumulator agency 130 issues a direct deposit to ACH 220, which results in the transmission of a direct deposit to intermediary B's bank 1914, which transacts with ACH 220 to process the direct deposit to recipient B's bank 1920. In so doing, ACH 220 issues a debit transaction to intermediary B's bank 1914 (step 2066) and issues a credit transaction to recipient B's bank 1920 (step 2067). Thereby, recipient B 1934 receives a disbursement in the form of a direct deposit (step 2068).

If disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit (step 2070). Similar to the system and methods described in FIGS. 17-18, in establishing a debit deposit, accumulator agency 130 has the option of where to locate the debit account. In system 1900, accumulator agency 130 establishes the direct deposit account at intermediary C's bank 1916, by transmitting the direct deposit information via ACH 220. Thereby, recipient C 1936 receives the disbursement in the form of a debit account at intermediary C's bank 1916 (step 2080). Alternatively, accumulator agency 130 can establish a debit deposit account at other locations, including accumulator agency's bank 210. Finally, although not depicted in FIG. 20, the system and methods consistent with this embodiment also contemplate the issuance of an invoice to recipient 330 for any disbursement (as indicated by the dotted line on FIG. 19).

As described above, the system and methods associated with FIGS. 19-20 provide for a more dynamic disbursement processing system than the system and methods associated with FIGS. 17-18. The system and methods consistent herewith allow for disbursement processing for mandatory as well as permissive obligations. Also, the system and methods allow for disbursement processing from entities other than non-custodial parents, through entities other than states, and to entities other than custodial parents.

FIG. 21 illustrates another alternative embodiment for a disbursement processing system consistent with the invention. Similar to system 1900 described in FIG. 19, system 2100 operates in the same manner as the system and methods disclosed in FIGS. 19-20, except system 2100 allows accumulator agency 130 to transact directly with ACH 220. In short, system 2100 allows accumulator agency 130 to function as a bank.

In system 2100 intermediary 310 (here shown as intermediary A 1912, intermediary B 1914, and intermediary C 1916) computes the disbursement due to recipient 330 and transmits the disbursement information in an EDI file to accumulator 130. Accumulator agency 130 receives the EDI

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file from intermediary 310 and processes the disbursement. If the disbursement is a check, accumulator agency 130 issues the check consistent with the system and methods disclosed for system 1700 in FIGS. 19-20.

If the disbursement is not a check, accumulator agency 130 processes an electronic transaction for the disbursement by issuing an EFT/FEDI transaction directly to ACH 220. Notably, in contrast to the system and methods described by FIGS. 17-20, the system and methods consistent with FIG. 21 allow accumulator agency 130 to transact directly with ACH 220. In this manner accumulator agency 130 functions as a bank. If the EFT/FEDI transaction is for a direct deposit, accumulator agency 130 issues a direct deposit via ACH 220. In system 2100, accumulator agency 130 issues a direct deposit to ACH 220, and in so doing, issues a debit transaction to accumulator agency 130 and issues a credit transaction to recipient B's bank 1920. Thereby, recipient B 1934 receives a disbursement in the form of a direct deposit. Alternatively, if the disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit. In establishing a debit deposit, accumulator agency 130 establishes a direct deposit account directly at accumulator agency 130. Thereby, accumulator agency 130 merely instructs recipient 1936 that a debit deposit account has been formed for its benefit. Although not depicted in FIG. 21, the system and methods consistent with this embodiment also contemplate the issuance of an invoice to recipient 330 for any disbursement (as indicated by the dotted line on FIG. 21).

Just as FIG. 16 describes a more dynamic payment processing system consistent with the invention by allowing accumulator agency 130 to function as a bank, the system and methods consistent with FIG. 21 enable the same advantages for a disbursement processing system. By allowing accumulator agency 130 to transact directly with ACH 220, transaction steps are omitted that allow for a more efficient and timely processing of disbursements. Of course, the omission of this one step includes but one of many changes that can be made to the systems and methods for disbursement processing consistent with the invention.

CONCLUSION

The systems consistent with the invention provide for more efficient and more economical methods for the processing of either or both payments and disbursements. The systems process payments using debit-based EFT and processes disbursements using addendum-based EDI. This improved payment and disbursement methodology provides many advantages over the current payment and disbursement technologies.

As described above, it will be apparent to those skilled in the art that various modifications and variations can be made in the processes of the present invention without departing from the spirit and scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention, provided they come within the scope of the appended claims and their equivalents. In this context, equivalents means each and every implementation for carrying out the functions recited in the claims, even if not explicitly described herein.

What is claimed is:

1. A method of accumulating a payment and processing a disbursement comprising the steps, performed by a processor, of:

instituting the payment with disbursement information from an employee to a recipient through an employer;

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transferring to an accumulator agency the payment and the disbursement information from the employer; initiating by the accumulator agency the payment through a bank as a debit transaction; transmitting by the accumulator agency the disbursement to a state as a first addendum transaction; receiving at the accumulator agency disbursement transaction information from the state regarding the disbursement to the recipient as a second addendum transaction; and executing by the accumulator agency the disbursement to the recipient.

2. The method of claim 1, further comprising the step of: issuing an invoice for the disbursement to the recipient.

3. The method of claim 1, wherein the payment is a child support payment.

4. The method of claim 1, wherein the payment is an alimony payment.

5. The method of claim 1, wherein the payment is a payment on a judgment.

6. The method of claim 1, wherein the payment is a payment on an attachment.

7. The method of claim 1, wherein the employee is a noncustodial parent.

8. The method of claim 1, wherein the recipient is a custodial parent.

9. The method of claim 1, wherein the executing step further includes the substep of paying the recipient via one of paper check, direct deposit, and debit deposit.

10. A system for accumulating a payment and processing a disbursement comprising:

- an instituting component configured to institute the payment with disbursement information from an employee to a recipient through an employer;
- a first transferring component configured to transfer to an accumulator agency the payment and the disbursement information from the employer;
- an initiating component configured to initiate by the accumulator agency the payment through a bank as a debit transaction;
- a second transmitting component configured to transmit by the accumulator agency the disbursement to a state as a first addendum transaction;
- a receiving component configured to receive at the accumulator agency disbursement transaction information from the state regarding the disbursement to the recipient as a second addendum transaction; and
- an executing component configured to execute by the accumulator agency the disbursement to the recipient.

11. The system of claim 10, further comprising:

- an issuing component configured to issue an invoice for the disbursement to the recipient.

12. The system of claim 10, wherein the payment is a child support payment.

13. The system of claim 10, wherein the payment is an alimony payment.

14. The system of claim 10, wherein the payment is a payment on a judgment.

15. The system of claim 10, wherein the payment is a payment on an attachment.

16. The system of claim 10, wherein the employee is a noncustodial parent.

17. The system of claim 10, wherein the recipient is a custodial parent.

18. The system of claim 10, wherein the executing component further includes a paying component configured to pay the recipient via one of paper check, direct deposit, and debit deposit.

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19. A method of processing a payment comprising the steps, performed by a processor, of:

- withholding by an employer a portion of an employee's salary for the payment;
- sending from the employer the payment to an accumulator agency;
- initiating by the accumulator agency the payment through a bank as a debit transaction; and
- executing the payment from the bank through an ACH as a second debit transaction.

20. The method of claim 19, further comprising the step of:

- processing the payment from the ACH to an employer's bank as a third debit transaction.

21. The method of claim 19, further comprising the step of:

- dispatching a credit reflecting the payment from the ACH to an intermediary's bank for the benefit of an intermediary.

22. The method of claim 21, wherein the sending step occurs by an addendum-based FEDI transaction.

23. The method of claim 22, wherein the FEDI transaction comprises a cash concentration or disbursement plus addenda (CCD+) payment format.

24. The method of claim 22, wherein the FEDI transaction comprises a corporate trade exchange (CTX) payment format.

25. The method of claim 21, wherein the initiating step occurs by a debit-base EFT transaction.

26. The method of claim 21, wherein the initiating step occurs by an addendum-based FEDI transaction.

27. The method of claim 21, wherein the payment is a child support payment.

28. The method of claim 21, wherein the payment is an alimony payment.

29. The method of claim 21, wherein the payment is a payment on a judgment.

30. The method of claim 21, wherein the payment is a payment on an attachment.

31. The method of claim 21, wherein the employee is a noncustodial parent.

32. The method of claim 21, wherein the recipient is a custodial parent.

33. The method of claim 21, wherein the intermediary is a state.

34. A system for processing a payment comprising:

- a withholding component configured to withhold by an employer a portion of an employee's salary for the payment;
- a sending component configured to send from the employer the payment to an accumulator agency;
- an initiating component configured to initiate by the accumulator agency the payment through a bank as a debit transaction; and
- an executing component configured to execute the payment from the bank through an ACH as a second debit transaction.

35. The system of claim 34, further comprising:

- a processing component configured to process the payment from the ACH to an employer's bank as a third debit transaction.

36. The system of claim 34, further comprising:

- a dispatching component configured to dispatch a credit reflecting the payment from the ACH to an intermediary's bank for the benefit of an intermediary.

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- 37. The system of claim 36, wherein the sending component occurs by an addendum-based FEDI transaction.
- 38. The system of claim 37, wherein the FEDI transaction comprises a cash concentration or disbursement plus addenda (CCD+) payment format.
- 39. The system of claim 37, wherein the FEDI transaction comprises a corporate trade exchange (CTX) payment format.
- 40. The system of claim 36, wherein the initiating component occurs by a debit-based EFT transaction.
- 41. The system of claim 36, wherein the initiating component occurs by an addendum-based FEDI transaction.
- 42. The system of claim 36, wherein the payment is a child support payment.

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- 43. The system of claim 36, wherein the payment is an alimony payment.
- 44. The system of claim 36, wherein the payment is a payment on a judgment.
- 45. The system of claim 36, wherein the payment is a payment on an attachment.
- 46. The system of claim 36, wherein the employee is a noncustodial parent.
- 47. The system of claim 36, wherein the recipient is a custodial parent.
- 48. The system of claim 36, wherein the intermediary is a state.

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(54) **METHOD AND APPARATUS FOR PAYMENT PROCESSING USING DEBIT-BASED ELECTRONIC FUNDS TRANSFER AND DISBURSEMENT PROCESSING USING ADDENDUM-BASED ELECTRONIC DATA INTERCHANGE**

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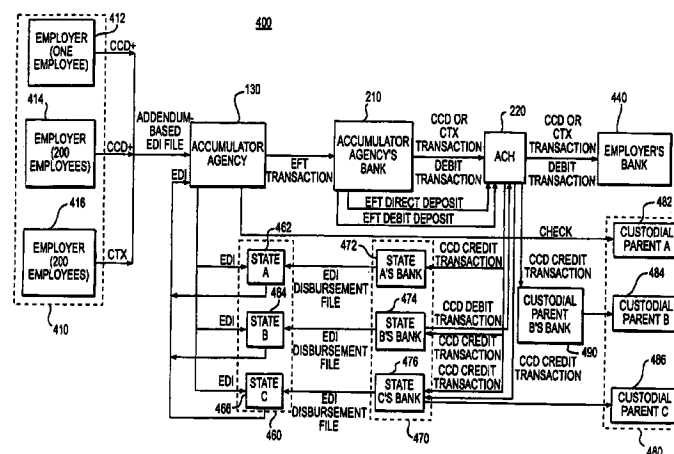
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Primary Examiner—Beverly M. Flanagan

(57)

ABSTRACT

This disclosure describes a payment and disbursement system, wherein an initiator authorizes a payment and disbursement to a collector and the collector processes the payment and disbursement through an accumulator agency. The accumulator agency processes the payment as a debit-based transaction and processes the disbursement as an

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addendum-based transaction. The processing of a debit-based transaction generally occurs by electronic funds transfer (EFT) or by financial electronic data interchange (FEDI).

The processing of an addendum-based transaction generally occurs by electronic data interchange (EDI).

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**EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307**

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claims 1, 8, 10, 17, 19, 21, 32, 33, 34, 36, 47 and 48 are determined to be patentable as amended.

Claims 2-7, 9, 11-16, 18, 20, 22-31, 35, 37-46, dependent on an amended claim, are determined to be patentable.

1. A method *by an accumulator agency* of accumulating a payment *through a bank* and processing a disbursement *to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities*, comprising the steps, performed by a processor, of:

instituting *at the accumulator agency* the payment with disbursement information from an employee to a recipient through an employer;

transferring to [an] *the accumulator agency* the payment and the disbursement information from the employer; initiating by the accumulator agency the payment through [a] *the bank* as a debit transaction;

transmitting by the accumulator agency the disbursement to [a] *the state* as a first addendum transaction;

receiving at the accumulator agency disbursement transaction information from the state regarding the disbursement to the recipient as a second addendum transaction; and

executing by the accumulator agency the disbursement to the recipient.

8. The method of claim 1, wherein the recipient is a custodial parent *or the state*.

10. A system *at an accumulator agency* for accumulating a payment *through a bank* and processing a disbursement *to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities*, comprising:

an instituting component *at the accumulator agency* configured to institute the payment with disbursement information from an employee to a recipient through an employer;

a first transferring component configured to transfer to [an] *the accumulator agency* the payment and the disbursement information from the employer,

an initiating component configured to initiate by the accumulator agency the payment through [a] *the bank* as a debit transaction;

a [second] transmitting component configured to transmit by the accumulator agency the disbursement to [a] *the state* as a first addendum transaction;

a *second* receiving component configured to receive at the accumulator agency disbursement transaction information from the state regarding the disbursement to the recipient as a second addendum transaction; and

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an executing component configured to execute by the accumulator agency the disbursement to the recipient.

17. The system of claim 10, wherein the recipient is a custodial parent *or the state*.

19. A method *by an accumulator agency* of processing a payment *through an accumulator agency's bank, wherein the accumulator agency and the accumulator agency's bank are separate entities*, comprising the steps, performed by a processor, of:

withholding by an employer a portion of an employee's salary for the payment *to the accumulator agency*;

[sending from the employer] *receiving at the accumulator agency* the payment [to an accumulator agency] *from the employer*;

initiating by the accumulator agency the payment through [a] *the accumulator agency's bank* as a debit transaction; and

executing the payment from the *accumulator agency's bank* through an ACH as a second debit transaction, *pursuant to instructions by the accumulator agency to the accumulator agency's bank*.

21. The method of claim 19, further comprising the step of:

dispatching a credit reflecting the payment from the ACH to [an intermediary's] *a state's bank* for the benefit of [an intermediary] *a governmental state entity of the United States, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities*.

32. The method of claim 21, wherein the recipient is a custodial parent *or the state*.

33. The method of claim 21, wherein the [intermediary is a] *state is a state agency*.

34. A system *at an accumulator agency* for processing a payment *through an accumulator agency's bank, wherein the accumulator agency and the accumulator agency's bank are separate entities*, comprising:

a withholding component configured to withhold by an employer a portion of an employee's salary for the payment *to the accumulator agency*;

a [sending] *receiving* component configured to [send from the employer] *receive at the accumulator agency* the payment [to an accumulator agency] *from the employer*;

an initiating component configured to initiate by the accumulator agency the payment through [a] *the accumulator agency's bank* as a debit transaction; and

an executing component configured to execute the payment from the *accumulator agency's bank* through an ACH as a second debit transaction, *pursuant to instructions by the accumulator agency to the accumulator agency's bank*.

36. The system of claim 34, further comprising

a dispatching component configured to dispatch a credit reflecting the payment from the ACH to [an intermediary's] *a state's bank* for the benefit of [an intermediary] *a governmental state entity of the United States, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities*.

47. The system of claim 36, wherein the recipient is a custodial parent *or the state*.

48. The system of claim 36, wherein the [intermediary is a] *state is a state agency*.

* * * * *

EXHIBIT B



US006119107A

United States Patent [19]
Polk

[11] **Patent Number:** **6,119,107**
[45] **Date of Patent:** ***Sep. 12, 2000**

- [54] **METHOD AND APPARATUS FOR PAYMENT PROCESSING USING DEBIT-BASED ELECTRONIC FUNDS TRANSFER AND DISBURSEMENT PROCESSING USING ADDENDUM-BASED ELECTRONIC DATA INTERCHANGE**
- [75] Inventor: **John Polk**, McLean, Va.
- [73] Assignee: **Lockheed Martin Corporation**, Bethesda, Md.
- [*] Notice: This patent is subject to a terminal disclaimer.
- [21] Appl. No.: **09/003,941**
- [22] Filed: **Jan. 7, 1998**

Related U.S. Application Data

- [62] Division of application No. 08/941,187, Sep. 30, 1997, Pat. No. 5,946,669.
- [51] **Int. Cl.⁷** **G06F 17/60**
- [52] **U.S. Cl.** **705/40**
- [58] **Field of Search** 705/1, 35, 40, 705/44; 902/41

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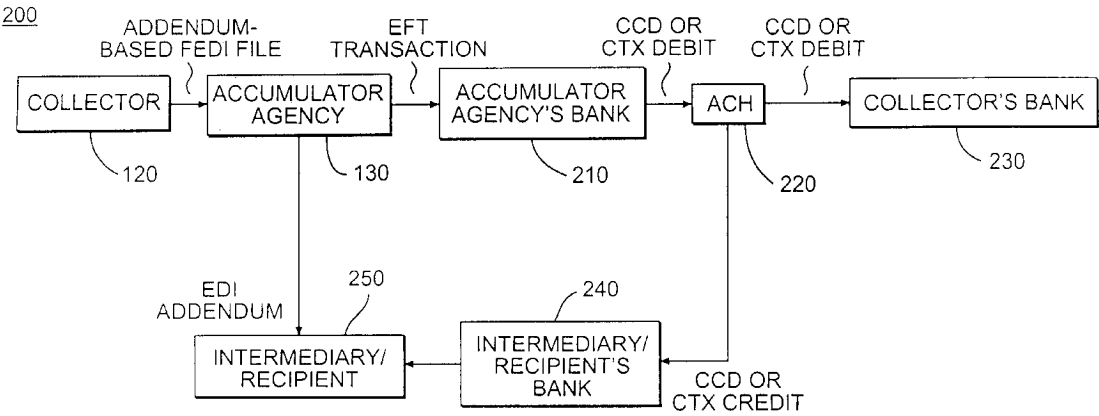
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Primary Examiner—Edward R. Cosimano
Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

[57] **ABSTRACT**

This disclosure describes a payment and disbursement system, wherein an initiator authorizes a payment and disbursement to a collector and the collector processes the payment and disbursement through an accumulator agency. The accumulator agency processes the payment as a debit-based transaction and processes the disbursement as an addendum-based transaction. The processing of a debit-based transaction generally occurs by electronic funds transfer (EFT) or by financial electronic data interchange (FEDI). The processing of an addendum-based transaction generally occurs by electronic data interchange (EDI).

70 Claims, 22 Drawing Sheets



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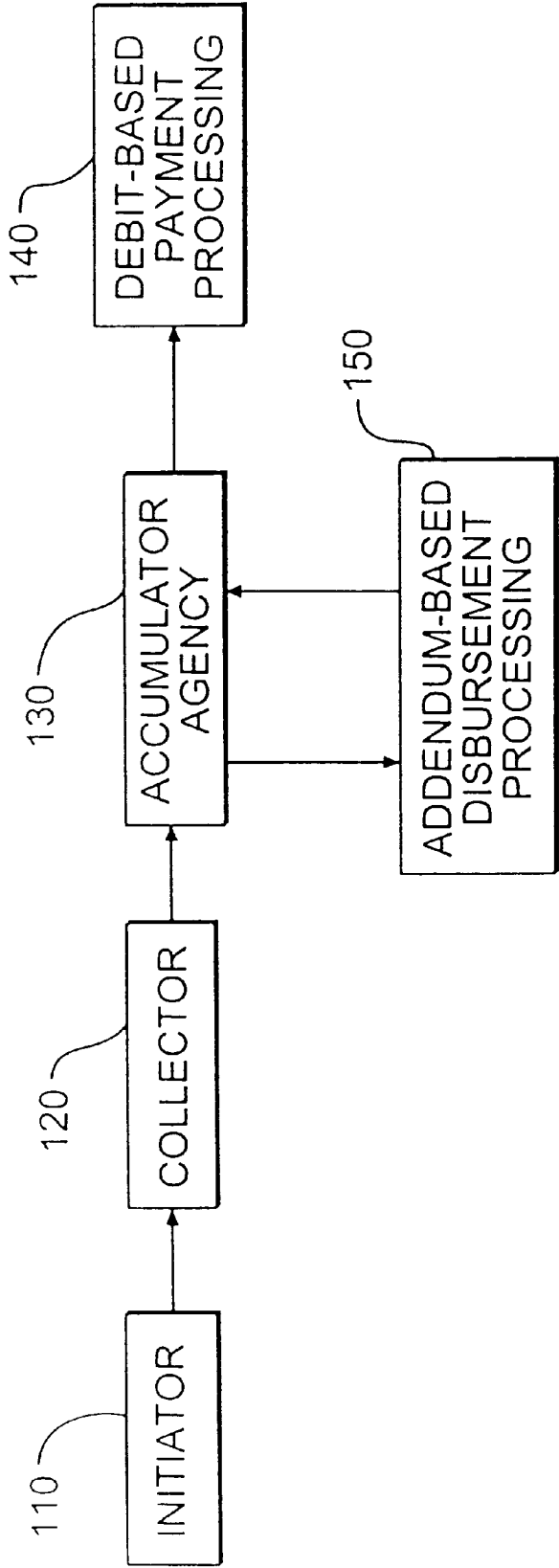


FIG. 1

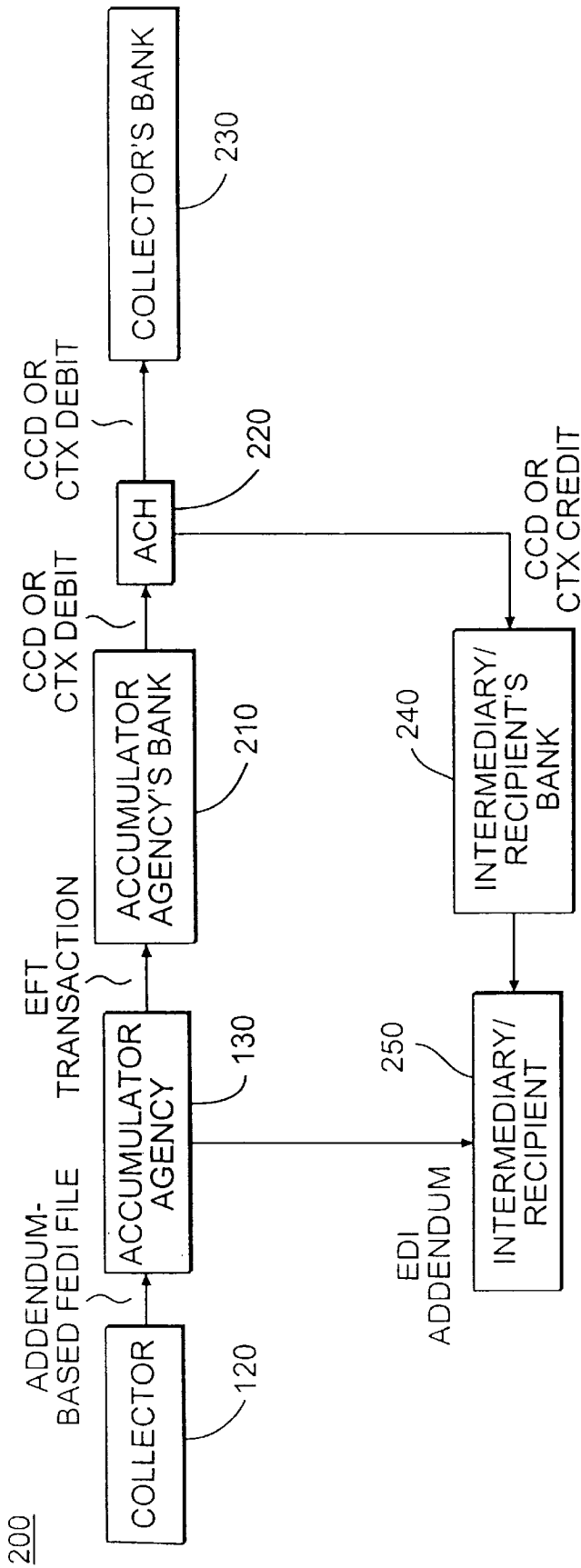


FIG. 2

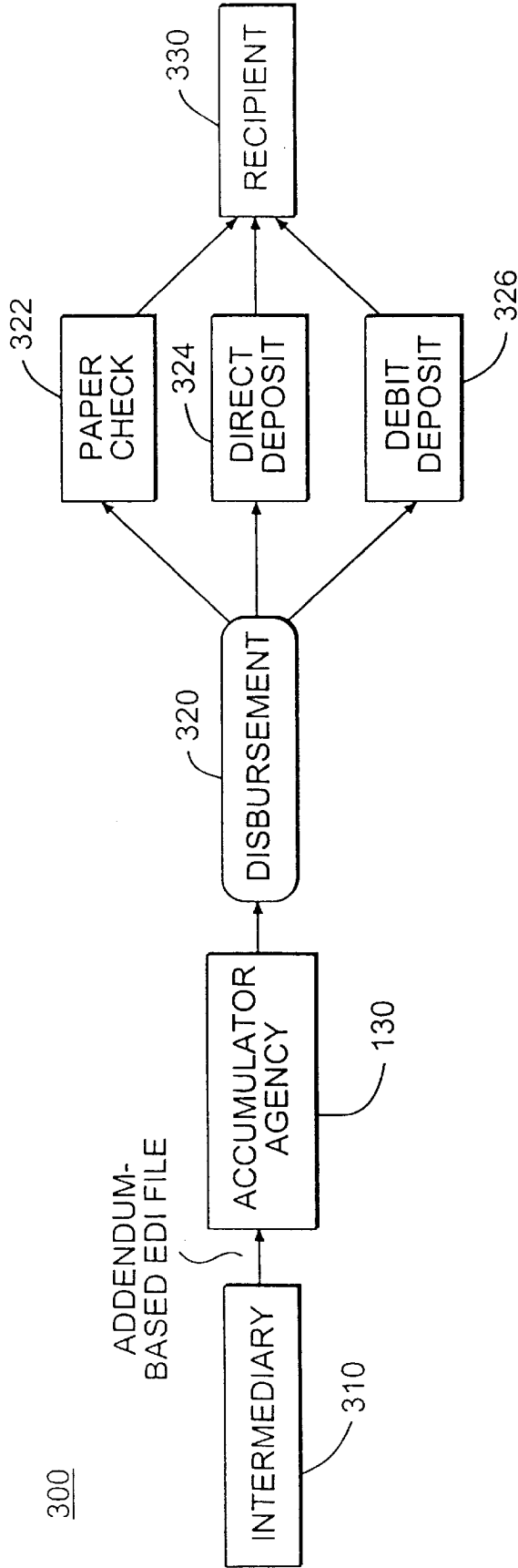


FIG. 3

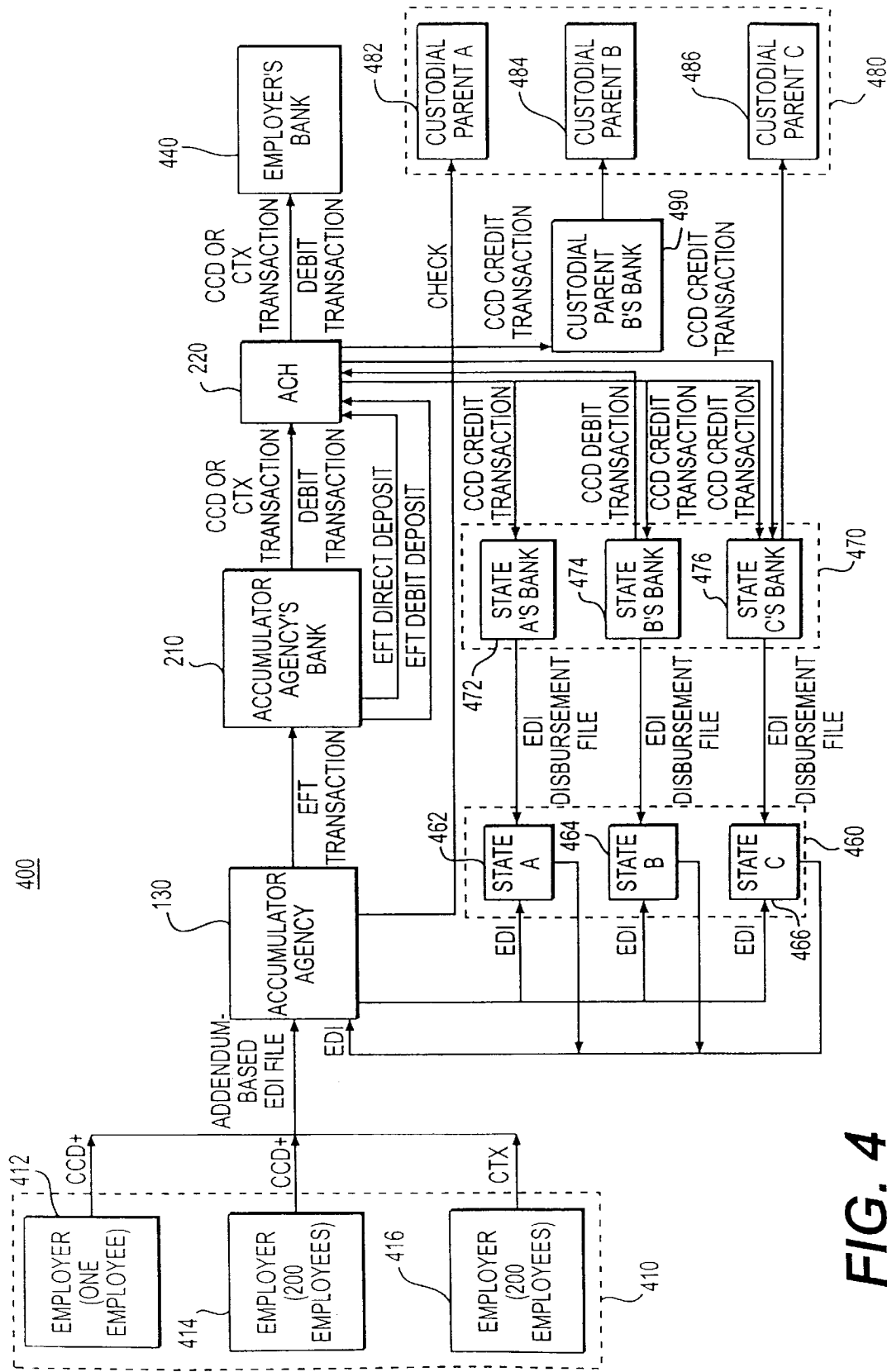


FIG. 4

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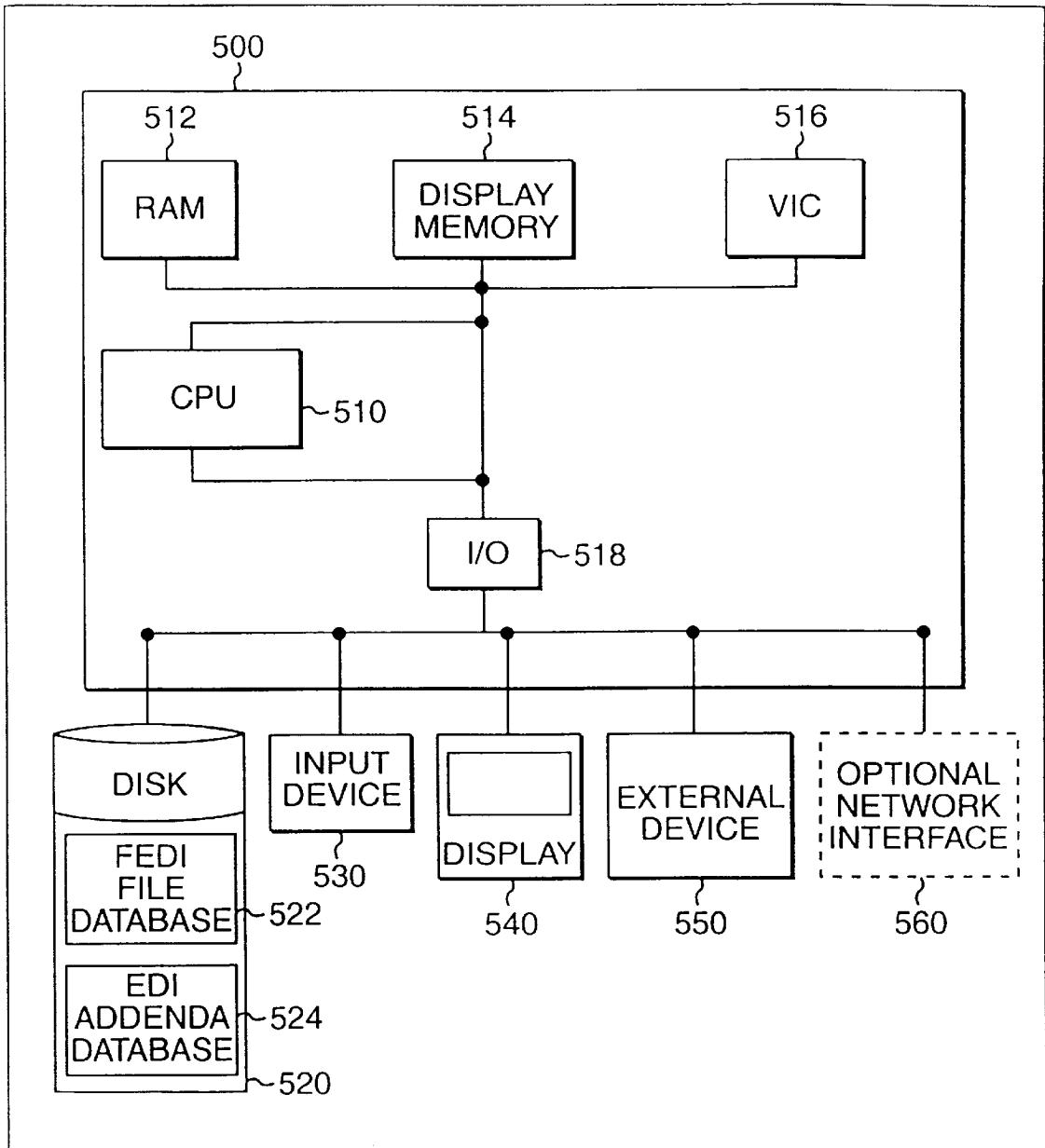


FIG. 5

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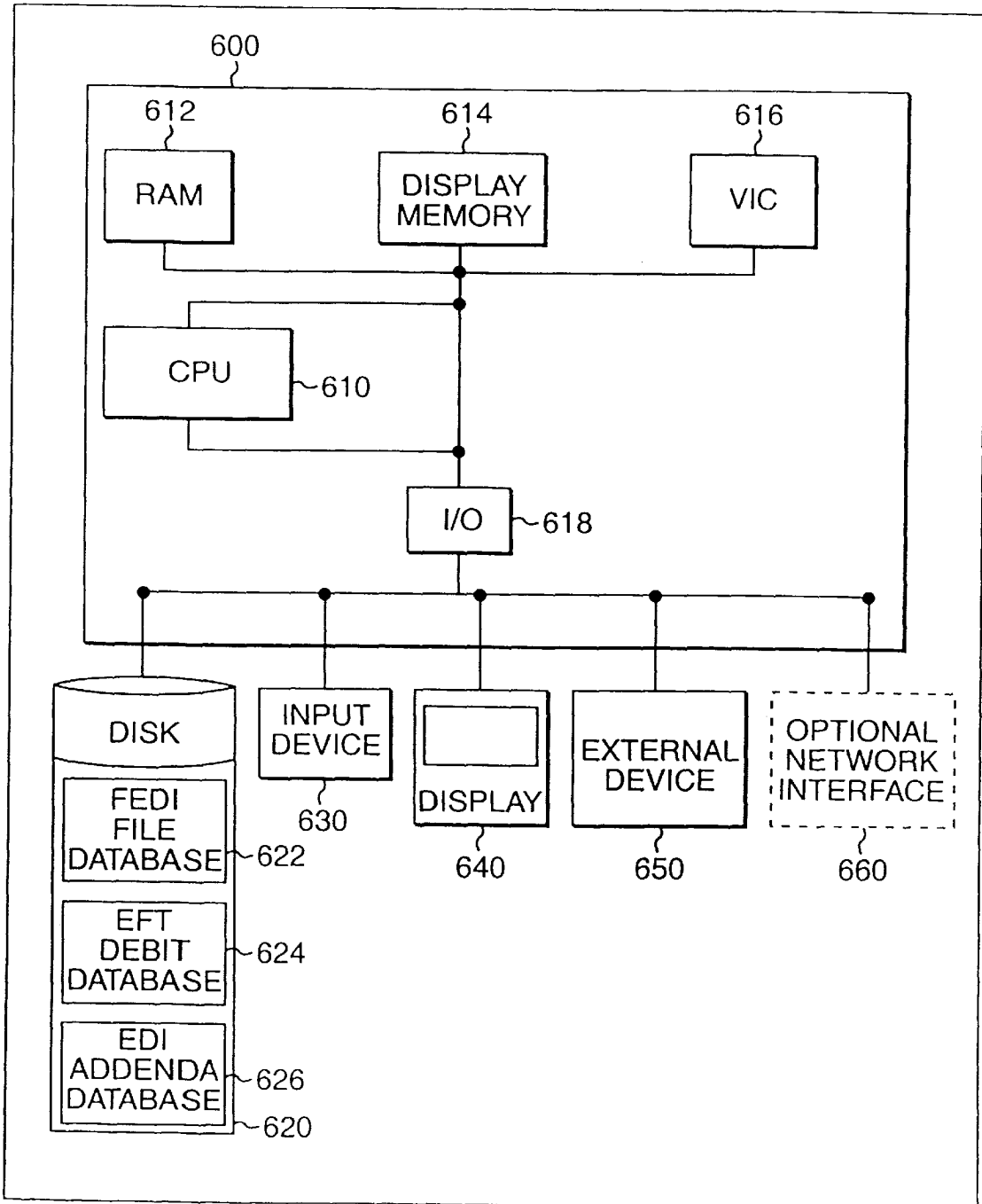


FIG. 6

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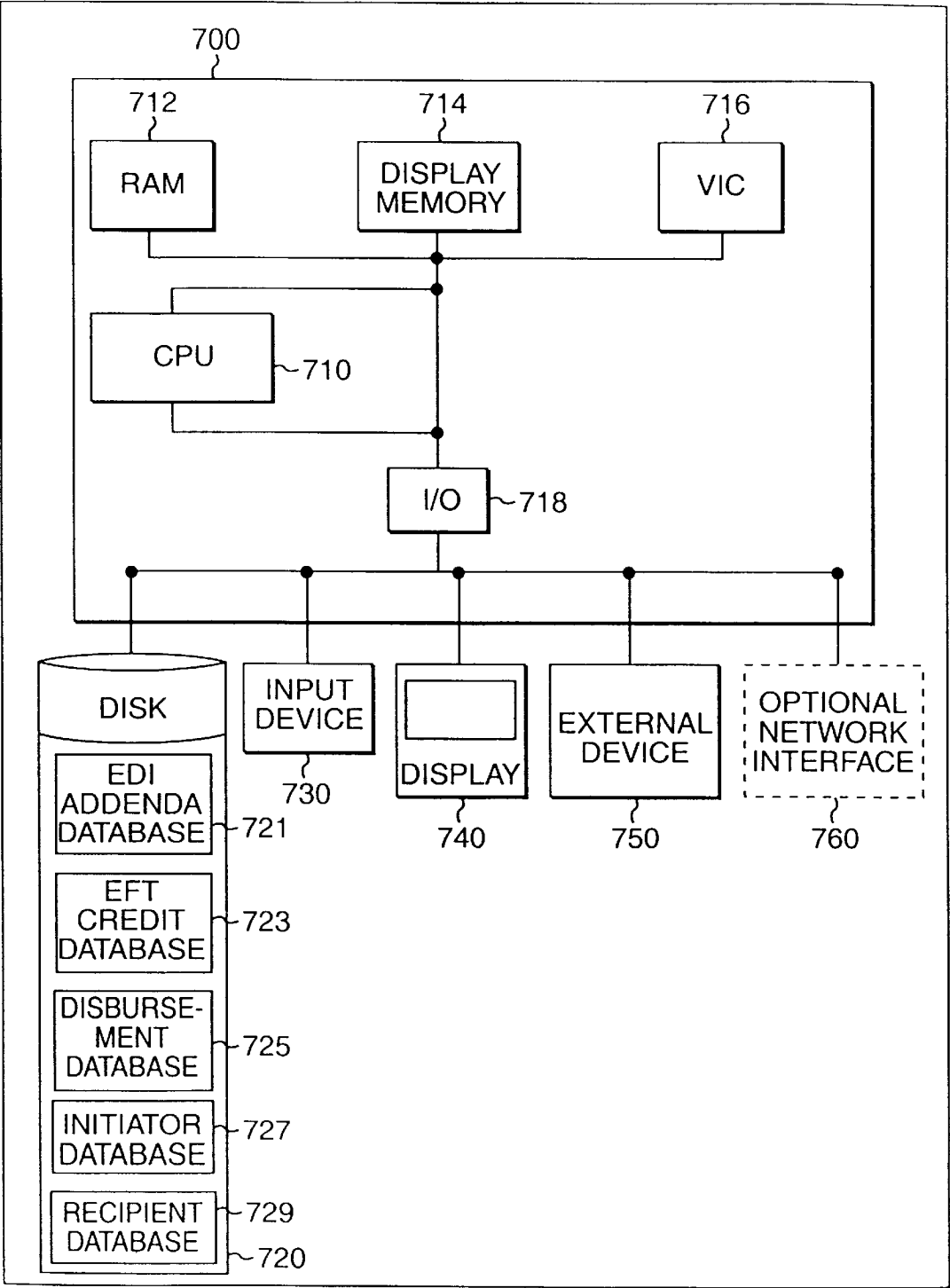


FIG. 7

FIELD	1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	IDENTIFICATION NUMBER	RECEIVING COMPANY NAME	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
FIELD INCLUSION REQUIREMENT	M	M	M	M	R	M	O	R	O	M	M
CONTENTS	'6'	NUMERIC	TTTTAAA	NUMERIC	ALPHANUMERIC	\$\$\$\$\$\$\$	ALPHANUMERIC	ALPHANUMERIC	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	1	2	8	1	17	10	15	22	2	1	15
POSITION	01-01	02-03	04-11	12-12	13-39	30-39	40-54	55-76	77-76	79-79	80-94

FIG. 8A

FIELD	1	2	3	4	5	6	7	8	9
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	TOTAL AMOUNT	IDENTIFICATION NUMBER	NUMBER OF ADDENDA RECORDS	RECEIVING COMPANY NAME/ID NUMBER
FIELD INCLUSION REQUIREMENT	M	M	M	M	R	M	O	R	R
CONTENTS	'6'	NUMERIC	TTTTAAAA	NUMERIC	ALPHANUMERIC	\$\$\$\$\$\$\$\$	ALPHANUMERIC	NUMERIC	ALPHANUMERIC
LENGTH	1	2	8	1	17	10	15	4	16
POSITION	01-01	02-03	04-11	12-12	13-39	30-39	40-54	55-58	59-74

FIELD	10	11	12	13
DATA ELEMENT NAME	RESERVED	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
FIELD INCLUSION REQUIREMENT	N/A	O	M	M
CONTENTS	BLANK	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	2	2	1	15
POSITION	75-76	77-78	79-79	80-94

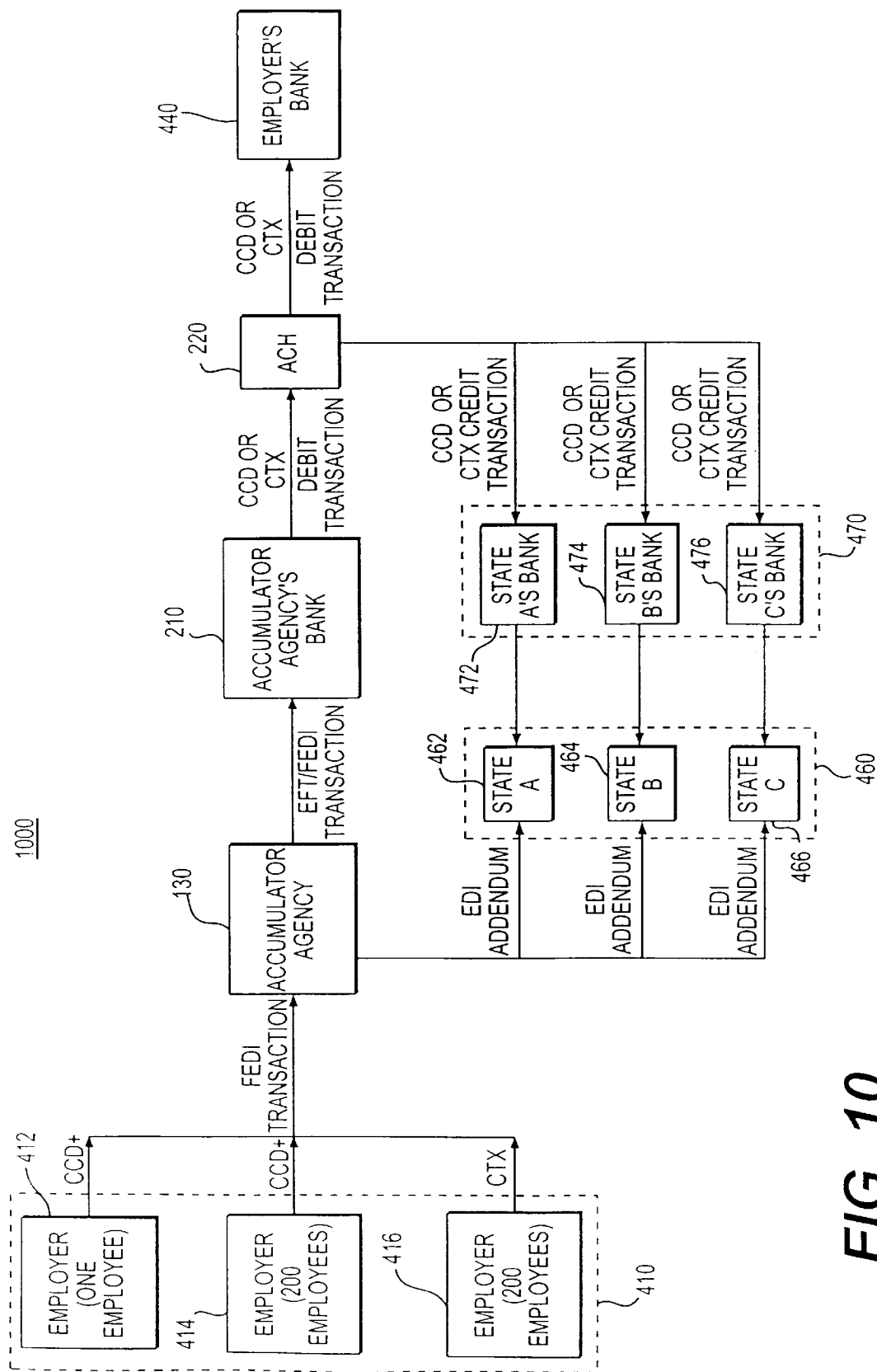
FIG. 8B

FIG. 9A

FIELD	1	2	3	4	5
DATA ELEMENT NAME	RECORD TYPE RECORDING	ADDENDA TYPE CODE	PAYMENT RELATED INFORMATION	ADDENDA SEQUENCE NUMBER	ENTRY DETAIL SEQUENCE NUMBER
FIELD INCLUSION REQUIREMENT	M	M	O	M	M
CONTENTS	'7'	'0.5'	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	1	2	80	4	7
POSITION	01-01	02-03	04-83	84-87	88-94

FIG. 9B

ELEMENT	COMMENTS	CONTENT	ATTRIBUTES		
			1	2	3
	SEGMENT IDENTIFIER	DED	M	ID	3/3
DED01	APPLICATION IDENTIFIER	CS	M	ID	2/2
DED02	CASE IDENTIFIER	XXXXXXXXXX	M	AN	1/20
DED03	PAY DATE	YYMMDD	M	DT	6/6
DED04	PAYMENT AMOUNT	\$\$\$\$\$\$\$\$CC	M	N2	1/10
DED05	NON-CUSTODIAL PARENT SOCIAL SECURITY NUMBER	XXXXXXXXXX	M	AN	9/9
DED06	MEDICAL SUPPORT INDICATOR	'Y'-YES, 'N'-NO	M	AN	1/1
DED07	NON-CUSTODIAL PARENT NAME	XXXXXXXXXX	O	AN	1/10
DED08	FIPS CODE	XXXXXX	O	AN	5/7
DED09	EMPLOYMENT TERMINATION INDICATOR	'Y'-YES	O	AN	1/1



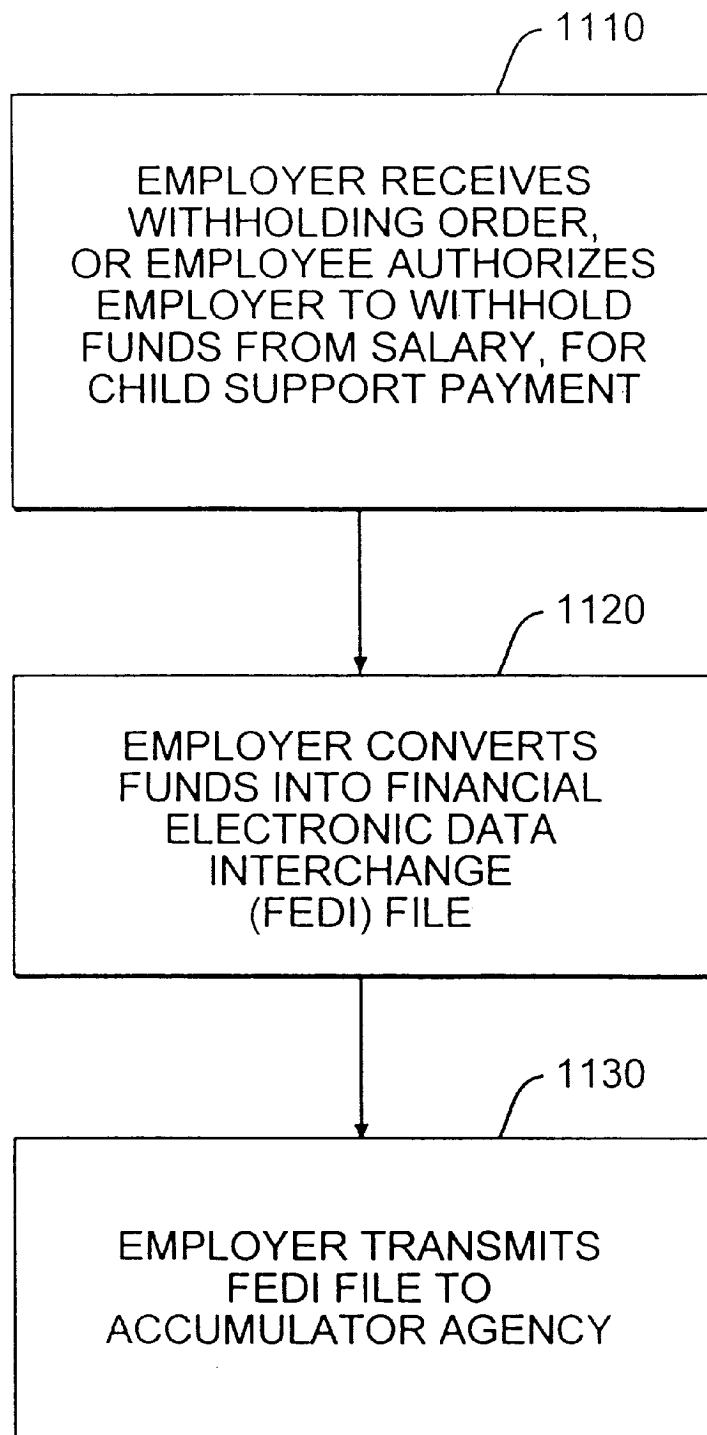


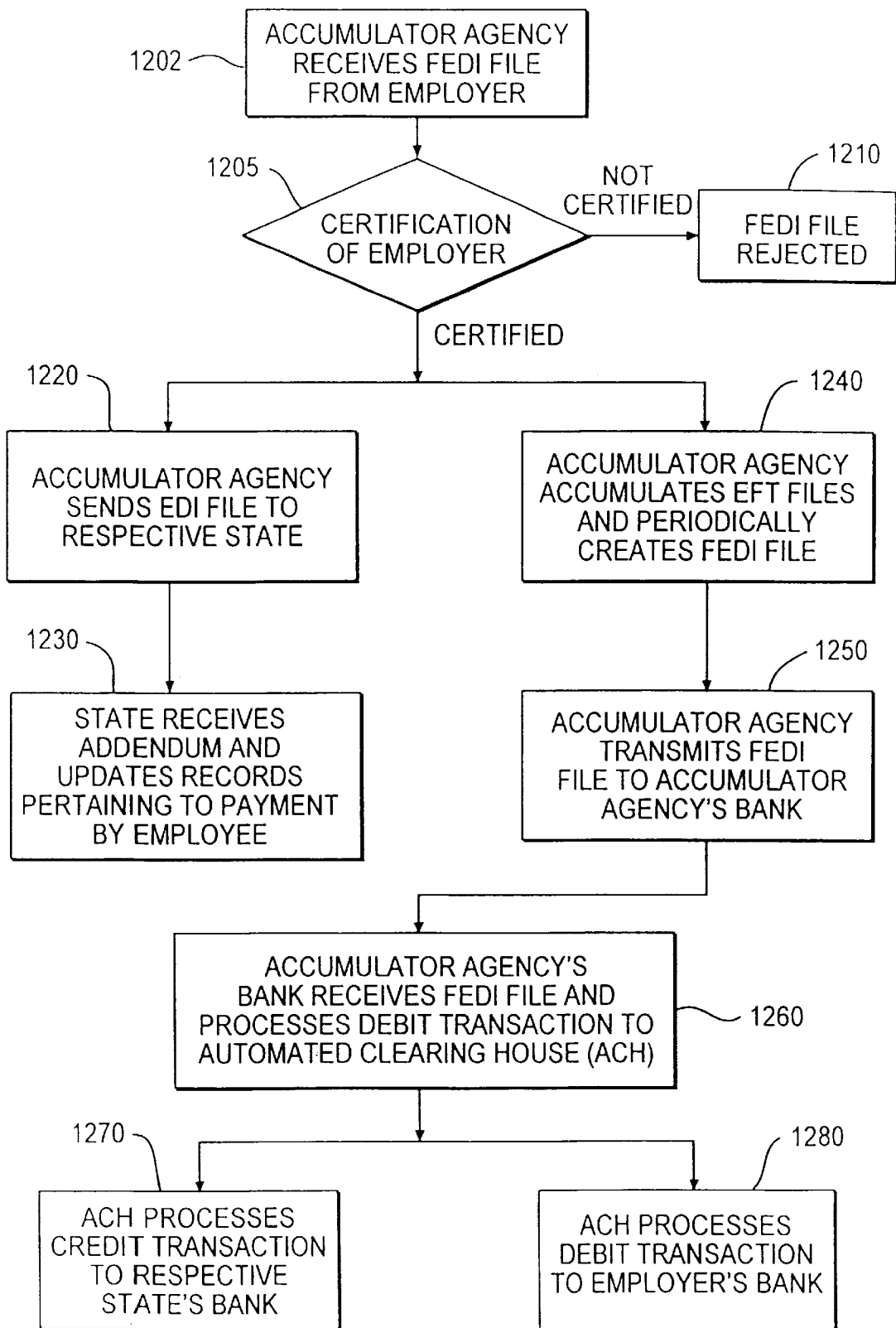
FIG. 11

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**FIG. 12**

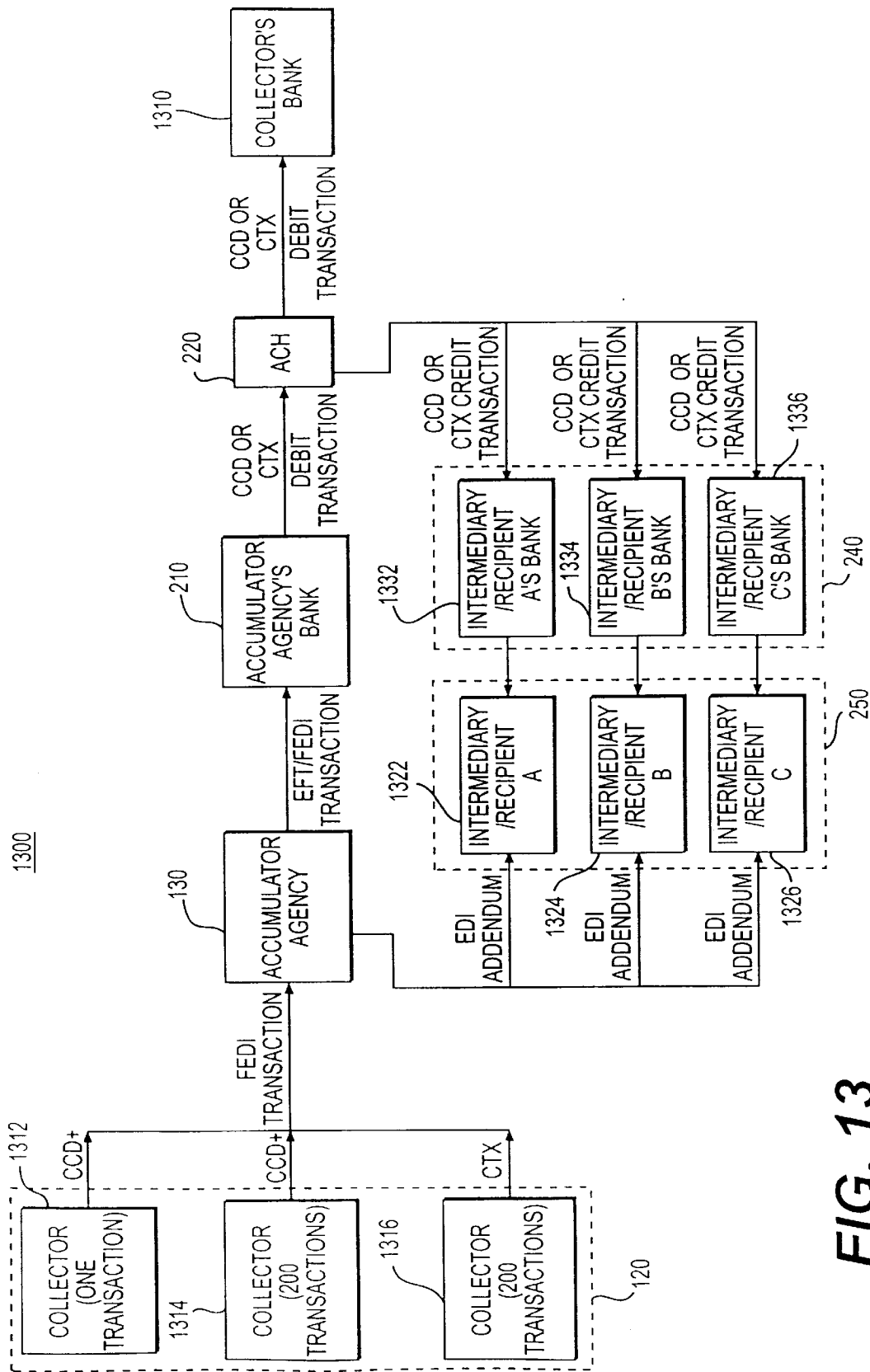


FIG. 13

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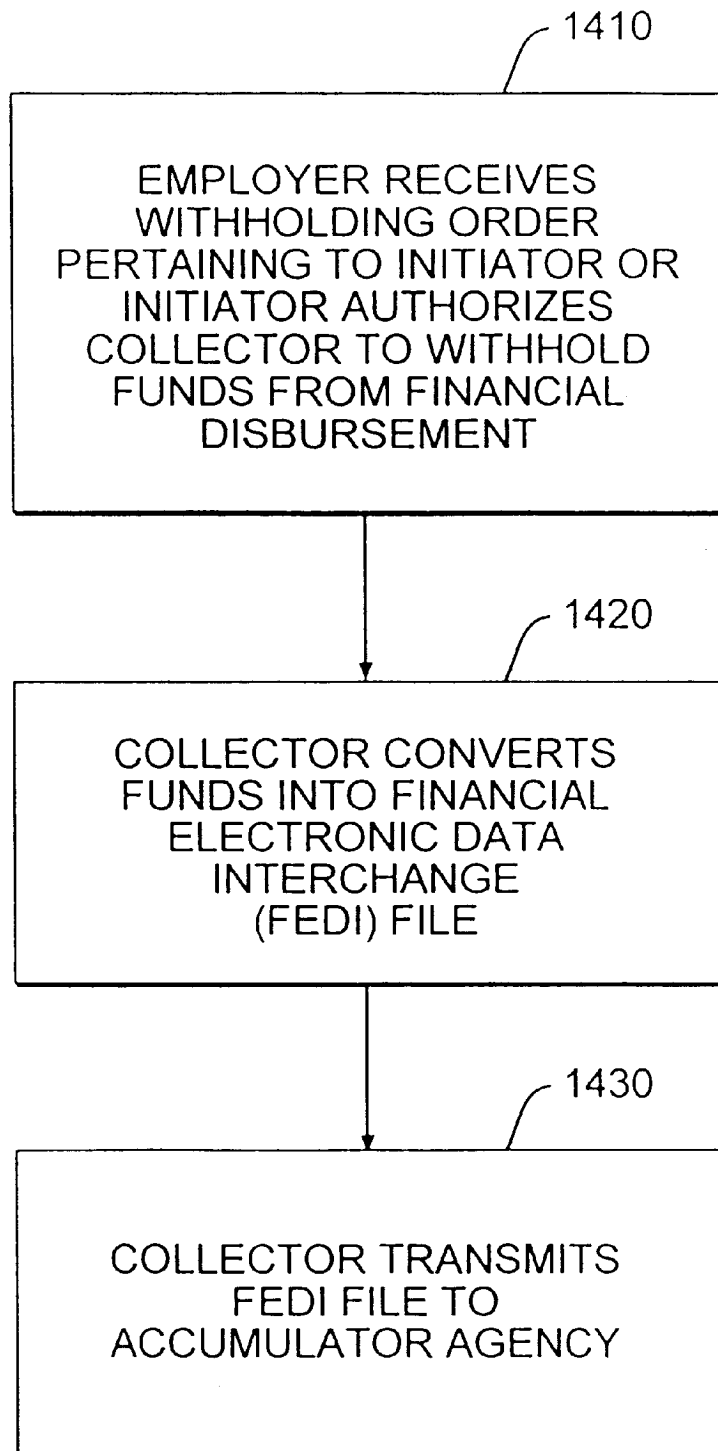


FIG. 14

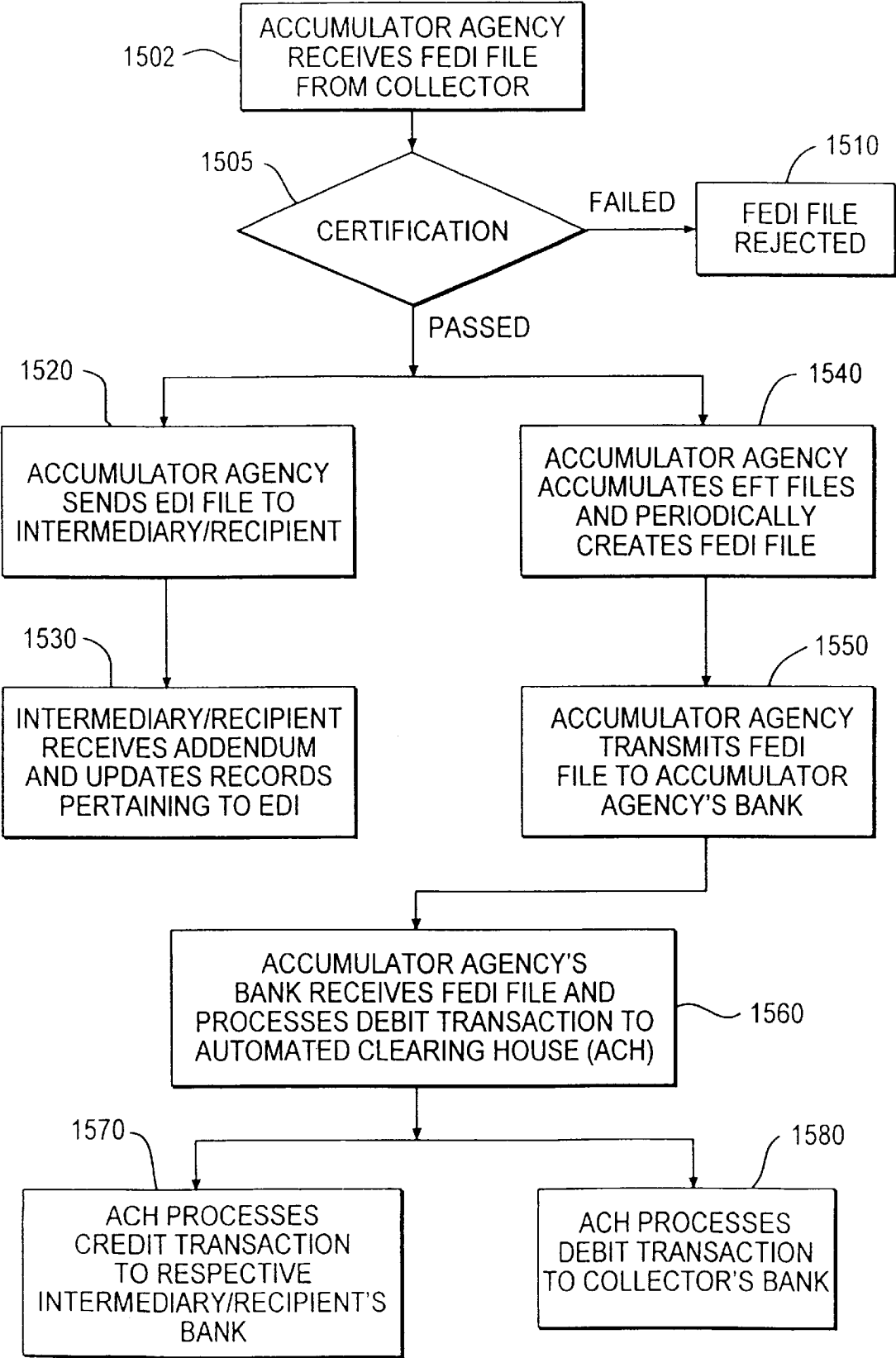


FIG. 15

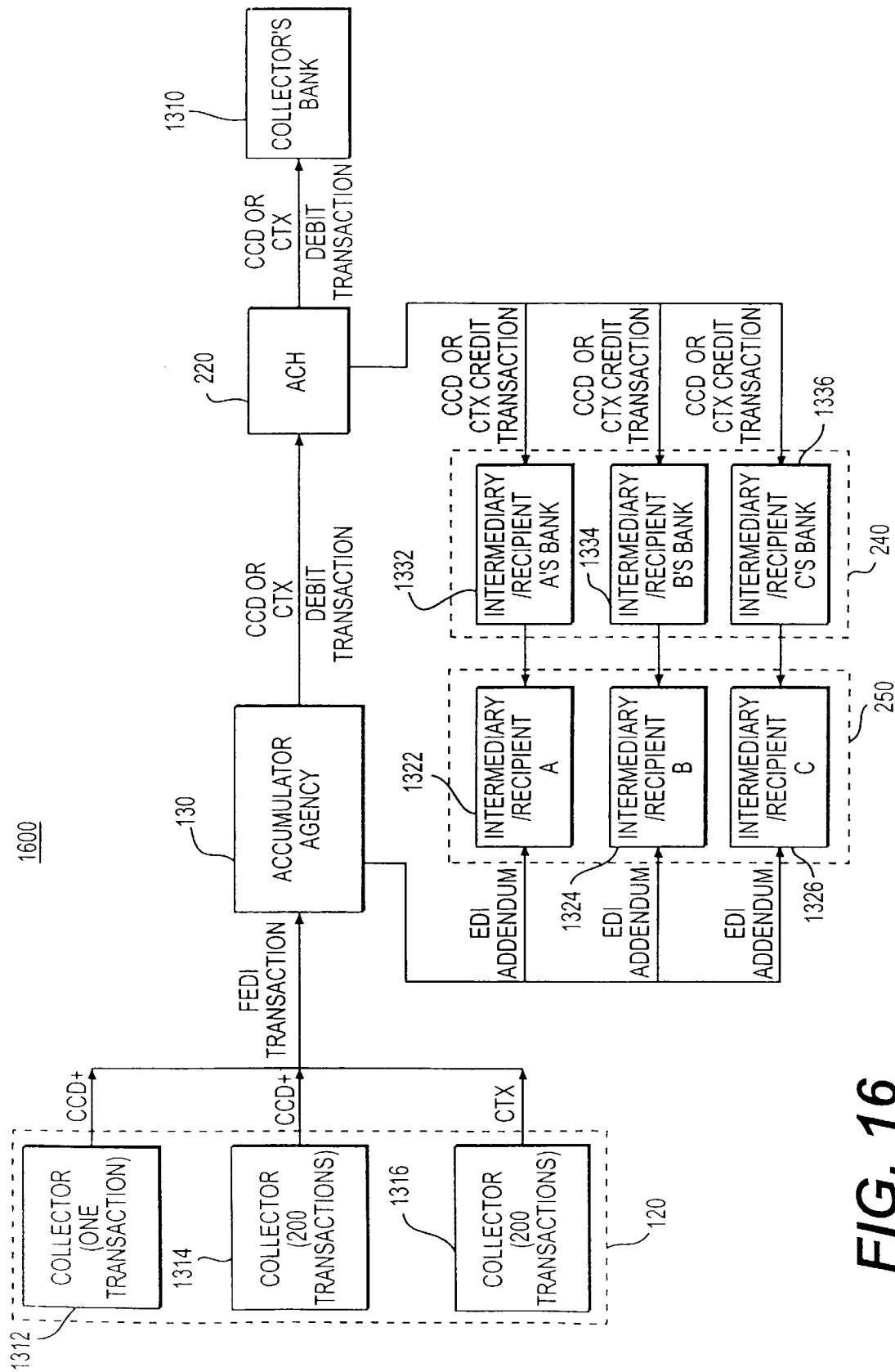


FIG. 16

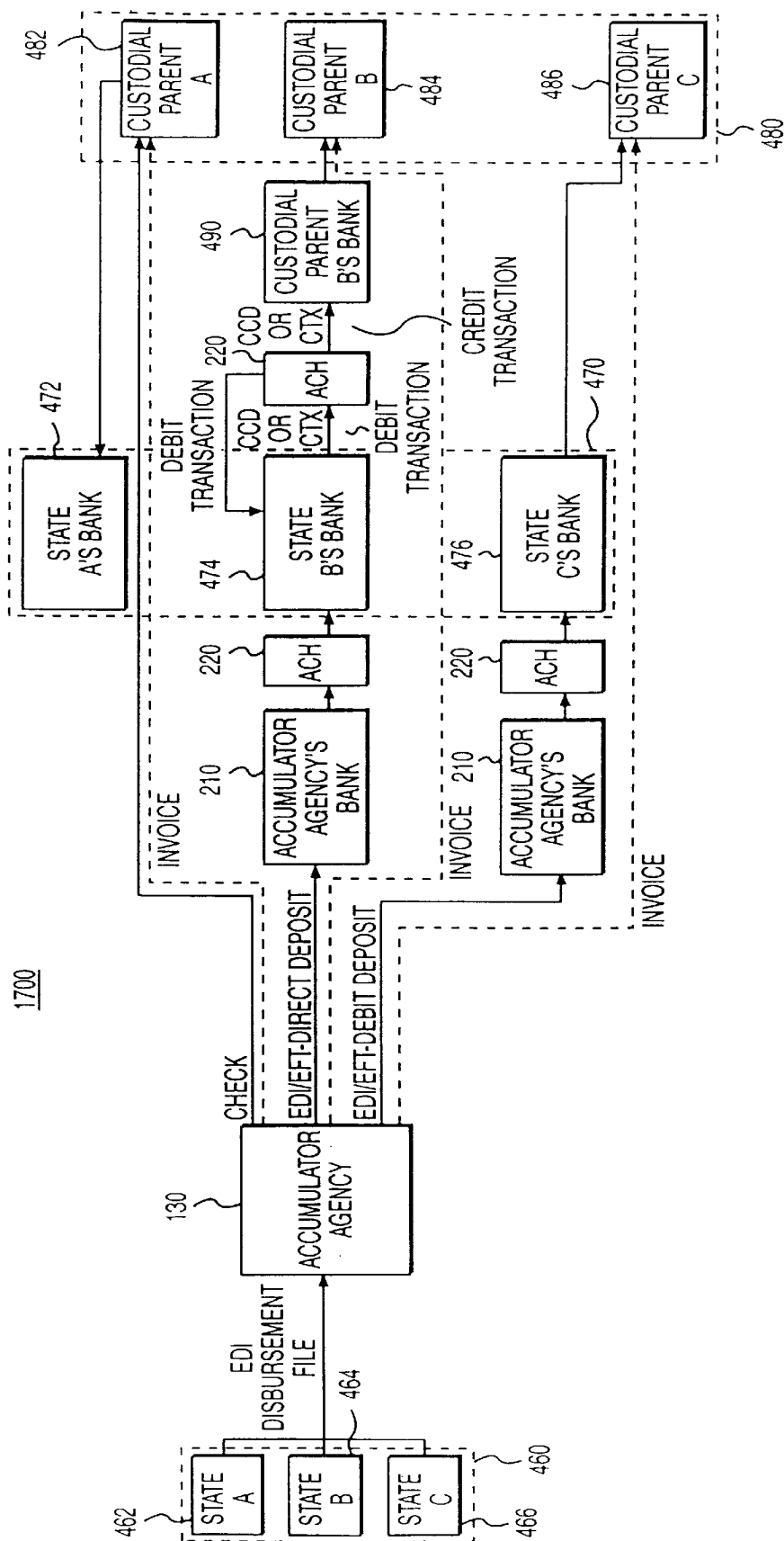


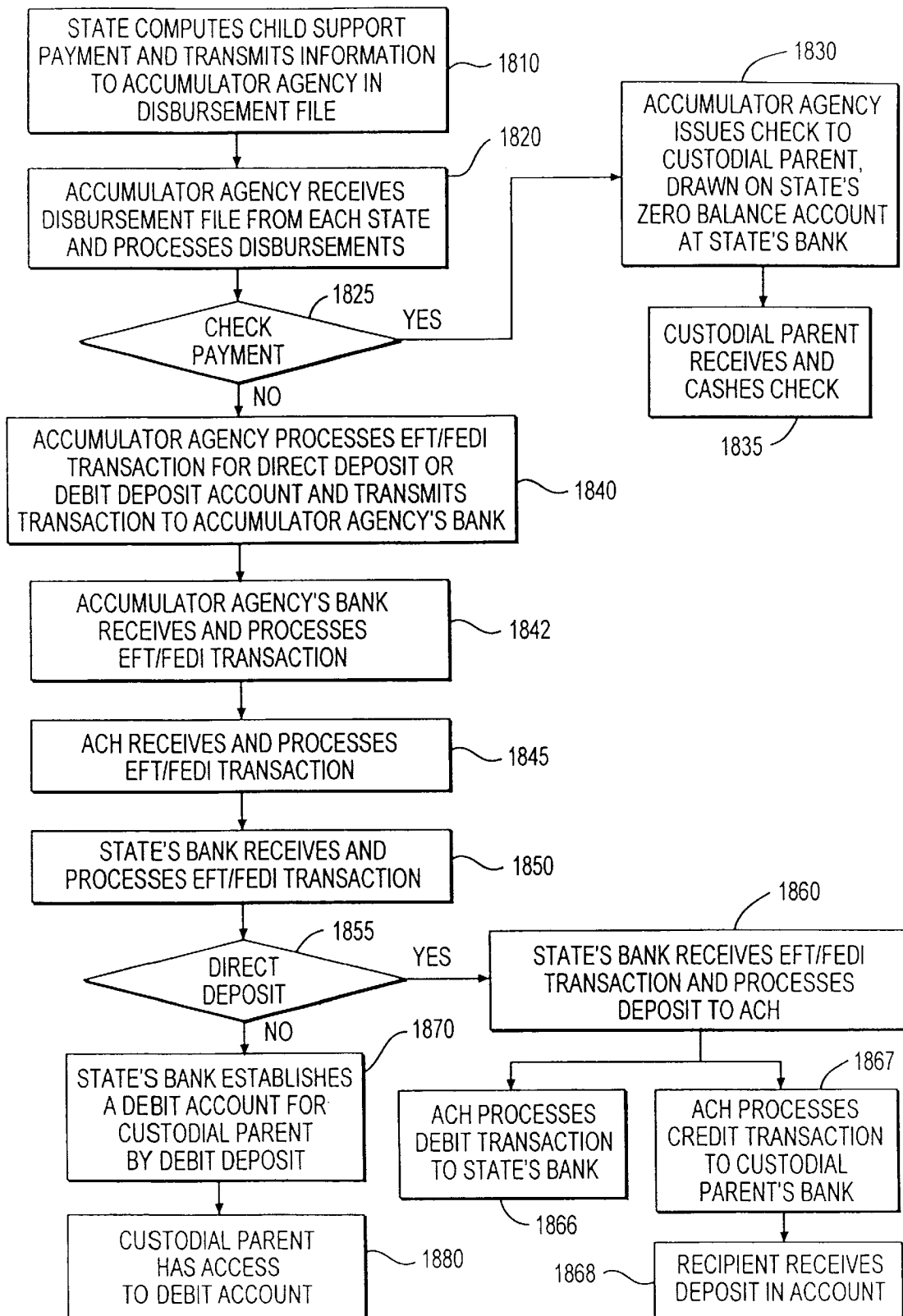
FIG. 17

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**FIG. 18**

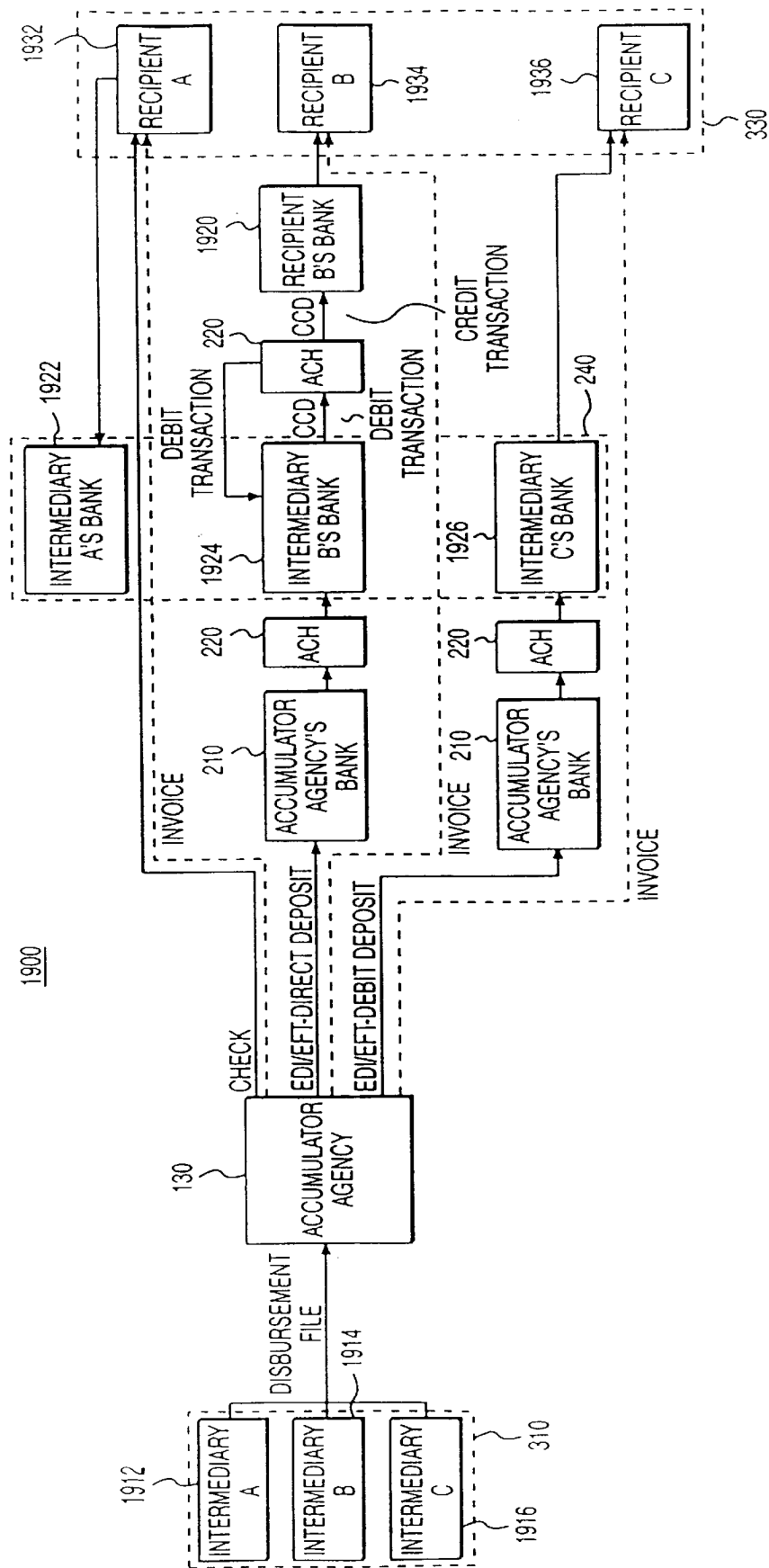


FIG. 19

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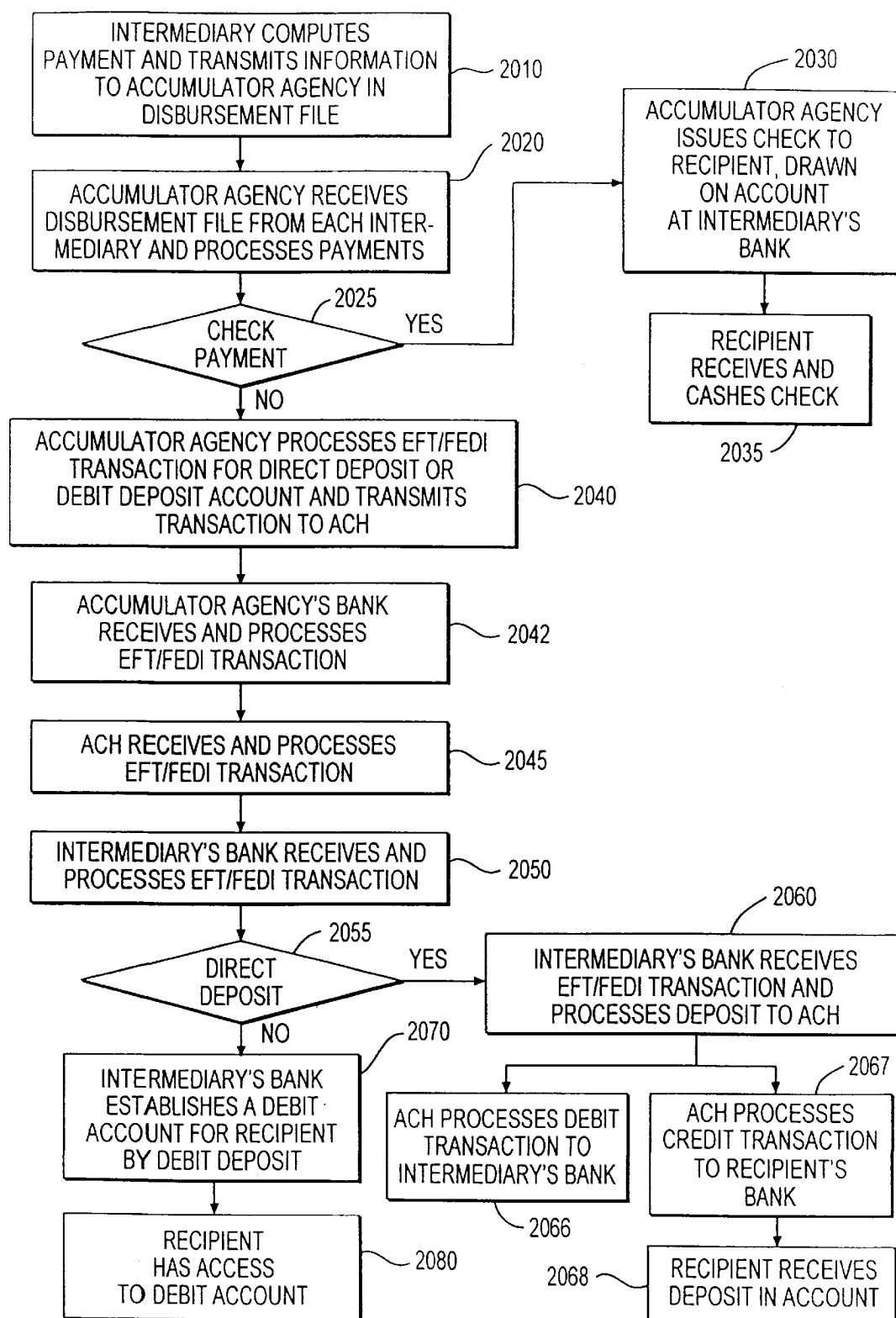


FIG. 20

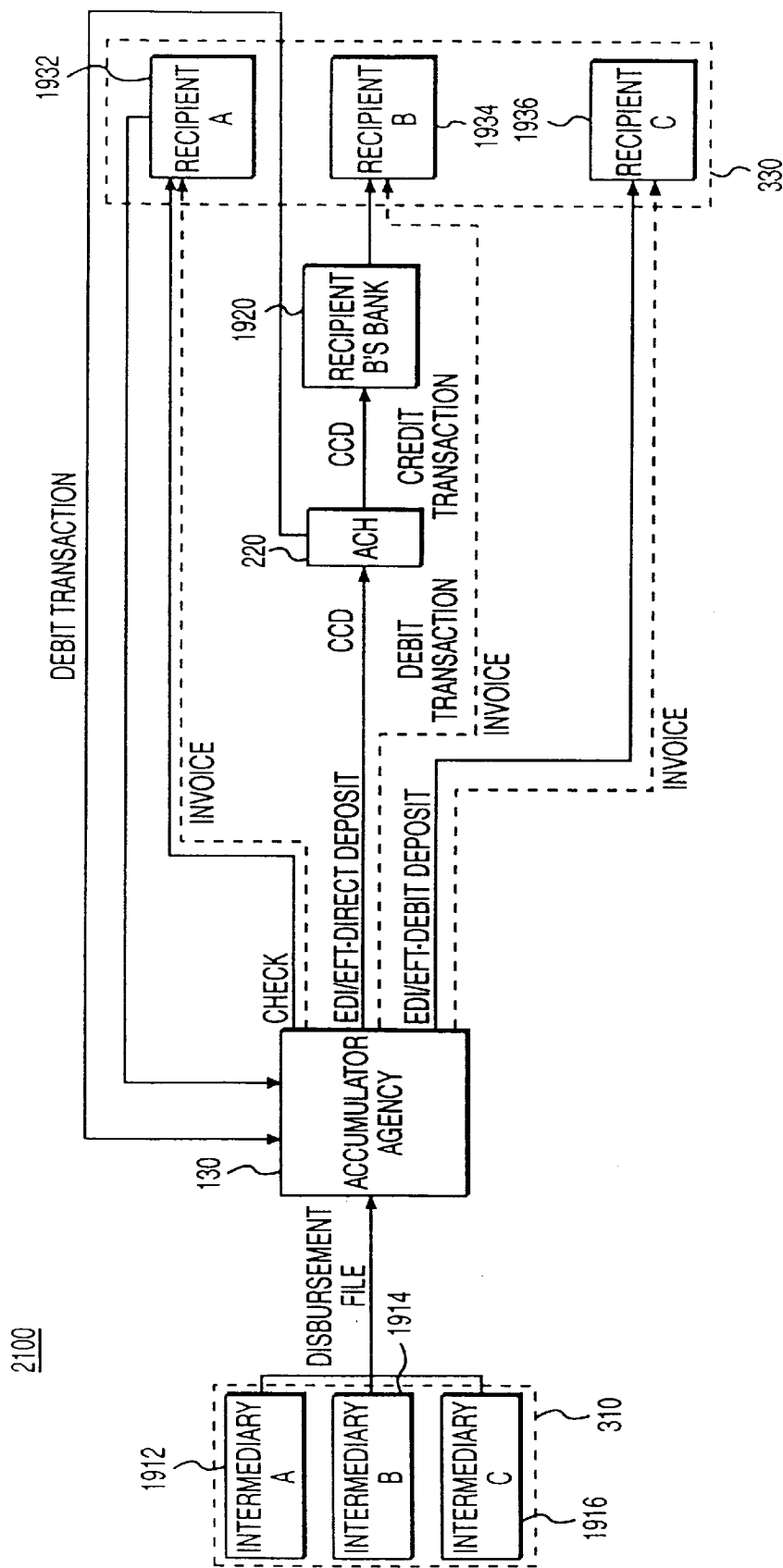


FIG. 21

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**METHOD AND APPARATUS FOR PAYMENT
PROCESSING USING DEBIT-BASED
ELECTRONIC FUNDS TRANSFER AND
DISBURSEMENT PROCESSING USING
ADDENDUM-BASED ELECTRONIC DATA
INTERCHANGE**

This is a division of application Ser. No. 08/941,187 filed Sep. 30, 1997, now U.S. Pat. No. 5,946,669, which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to the processing of payments and disbursements. More particularly, the invention relates to a method and apparatus for processing payments using debit-based electronic funds transfer and processing disbursements using addendum-based electronic data interchange.

2. Description of the Related Art

If an employee owes a permissive or mandatory obligation to a third party, the employee has few options for making recurring payments through the employer. Presently, most employers do not have the capability to process payments and disbursements for an employee through their payroll systems. If an employee has a recurring permissive obligation, the employee may make payments on this obligation through the traditional means, such as, for example, payment by cash, payment by a check, or electronic payment through the employee's bank. Similarly, if an employee has a recurring mandatory obligation, such as, for example, a child support payment, an alimony payment, or other similar court-enforced mandatory obligations, the employee may also make payments on these obligations through the same traditional methods. In either of these situations, however, there are few options for an employee to make payments or disbursements through an employer.

For recurring mandatory obligations, one option is for an employer to withhold an amount from an employee's wages and to make subsequent disbursement of the amount to a particular receiving entity. This withholding generally occurs as a court-sanctioned withholding, such as a garnishment. For example, there are presently systems that allow the payment and disbursement of child support obligations from an employer directly into the bank account of a state's child support agency. One present system comprises computer software that allows an employer to extract data from any corporate financial application in order to process the obligation. The software then connects with an automated clearinghouse and processes an electronic payment for the obligation. The electronic transaction is a credit-based transaction. In a credit-based transaction, the automated clearinghouse issues a credit to the state agency based on the amount of the obligation. The bank for the state agency receives the credit and subsequently issues a debit against the bank account of the employer. The automated clearinghouse receives the debit from the bank of the state agency and processes the debit against the bank of the employer. When the amount of the obligation is satisfied through the automated clearinghouse, the credit held by the bank of the state agency is satisfied by the debit issued against the bank of the employer. Another present system performs similar operations, but the system functions only on its own proprietary software. These current methodologies for payment and disbursement processing are inefficient and undesirable based at least on three grounds.

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First, the current methods for payment and disbursement processing require that employers use credit-based transactions. These transactions involve numerous interactions with an automated clearinghouse, which involve both financial and temporal inefficiencies. A credit-based transaction is financially inefficient because this type of transaction requires more interactions with an automated clearinghouse. Each time that a transaction passes through an automated clearinghouse, a processing fee is charged. Also, a credit-based transaction is temporally inefficient. Because a credit-based transaction must pass through an automated clearinghouse in multiple incantations, this type of transaction takes more time to complete.

Second, the current methods for payment and disbursement processing only allow the processing of one financial transaction at a time. This inefficiency results because the current methods use a payment format that is limited to one financial exchange per payment or disbursement transaction. For all electronic transactions with an automated clearinghouse, there are four available formats: cash concentration or disbursement (CCD), cash concentration or disbursement plus addenda (CCD+), corporate trade exchange (CTX), and corporate trade payments (CTP). The current systems utilize the CCD+ format, a combination of the CCD format and an addendum. The CCD+ format is limited to a single addenda record and is thus limited to one payment and disbursement per transaction. An addenda record enables the exchange of electronic payments as well as payment-related information through financial institutions over an automated clearinghouse network. In contrast, the CTX format allows one electronic payment to cover multiple obligations, therefore including up to 9,999 addenda records. The CTP format utilizes a distinct combination of addenda records, but the CTP format was discontinued effective April 1996. Therefore, because the current systems only utilize the CCD+ format, they can only process transactions one at a time.

In addition to these financial and temporal inefficiencies, the current methods also contain inherent structural inefficiencies. The current methods for payment and disbursement processing all require a bank both at the beginning and at the end of each financial transaction. Accordingly, these systems do not allow the employer to initiate a financial transaction to a recipient directly through an automated clearinghouse. Instead, the systems require that an employer initiate the financial transaction at a bank, that the bank process the financial transaction through an automated clearinghouse, and that the automated clearinghouse complete the transaction between the employer and the recipient. For the current systems, these processes include multiple transactions through the automated clearinghouse. These structural inefficiencies inure due to the inability of the employer to initiate or process electronic transactions through an automated clearinghouse.

The inefficiencies and other shortcomings in the current methodologies for payment and disbursement processing reflect undesirable diminutions in capacity and quality that could be achieved by further development of improved payment and disbursement processing methods. Thus, the current payment and processing methods reflect an unsatisfactory development of methods and systems to process both the permissive and mandatory obligations of an employee by an employer and subsequent disbursement to an intended recipient.

SUMMARY OF THE INVENTION

The present invention is directed to a method and system that obviates problems due to the limitations and disadvantages of the prior art.

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It is an object of one embodiment of the invention to provide a system whereby a collector of funds may easily process a payment and a disbursement.

It is another object of another embodiment of the invention to enable a collector to transmit an electronic payment and an addendum-based file to an accumulator agency for processing.

It is still another object of another embodiment of the invention to enable an accumulator agency to receive an electronic payment and to process a payment as a debit-based transaction.

It is yet another object of another embodiment of the invention to enable an accumulator agency to receive an addendum-based file and to process a disbursement based on the addendum information.

To achieve these and other objects, and in accordance with the purposes of the invention, as embodied and broadly described, one aspect of the invention includes a method of accumulating a payment and processing a disbursement. This method comprises initiating a payment with disbursement information from a payor to a payee through a collector; transferring to an accumulator agency the payment and the disbursement information from the collector; processing from the agency the payment as a debit transaction; and processing from the agency the disbursement information as an addendum transaction.

A further aspect of the invention includes a method of processing a payment. This method comprises receiving payment information at a collector; sending the payment information from the collector to an accumulator agency; receiving at the accumulator agency payment information from the collector regarding the payment; and initiating by the accumulator agency the payment as a debit transaction.

Another aspect of the invention includes a method of processing a disbursement. This method comprises transmitting by an accumulator agency disbursement information to an intermediary; receiving at the accumulator agency disbursement transaction information from the intermediary regarding authorization for a disbursement as an addendum transaction; and executing the disbursement to a recipient.

Additional aspects of the invention are disclosed and defined by the appended claims. It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings are included to provide a further understanding of the invention, are incorporated in and constitute a part of this specification, illustrate preferred embodiments of the invention, and, together with the description, serve to explain the principles of the invention.

In the drawings,

FIG. 1 is a block diagram of a payment and disbursement processing system;

FIG. 2 is a block diagram of a debit-based payment processing system in accordance with one embodiment of the present invention, as shown in FIG. 1;

FIG. 3 is a block diagram of an addendum-based disbursement processing system in accordance with one embodiment of the present invention, as shown in FIG. 1;

FIG. 4 is a block diagram of a payment and disbursement processing system, in accordance with a preferred embodiment of the present invention, as shown in FIG. 1;

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FIG. 5 is a block diagram of a collector, as shown in FIG. 1;

FIG. 6 is a block diagram of an accumulator agency, as shown in FIG. 1;

FIG. 7 is a block diagram of an intermediary/recipient, as shown in FIG. 2;

FIGS. 8A and 8B are samples of the contents of the financial electronic data interchange database and the electronic funds transfer database stored in the collector terminal shown in FIG. 5, the accumulator agency server shown in FIG. 6, and the intermediary/recipient terminal shown in FIG. 7;

FIGS. 9A and 9B are samples of the contents of the electronic data interchange addenda database stored in the collector terminal shown in FIG. 5, the accumulator agency server shown in FIG. 6, and the intermediary/recipient terminal shown in FIG. 7;

FIG. 10 is a block diagram of a payment processing system, in accordance with the preferred embodiment of the present invention, as shown in FIG. 4;

FIG. 11 is a flow diagram of a method for initiating a payment, in accordance with the embodiment of the invention, as shown in FIG. 10;

FIG. 12 is a flow diagram of a method for implementing payment processing, in accordance with the embodiment of the invention, as shown in FIG. 10;

FIG. 13 is a block diagram of a payment processing system, in accordance with an alternative embodiment of the present invention, as shown in FIG. 2;

FIG. 14 is a flow diagram for a method for initiating a payment, in accordance with the embodiment of the invention, as shown in FIG. 13;

FIG. 15 is a flow diagram for a method for implementing payment processing, in accordance with the embodiment of the invention, as shown in FIG. 13;

FIG. 16 is a block diagram for a payment processing system, in accordance with another alternative embodiment of the present invention, as shown in FIG. 2;

FIG. 17 is a block diagram for a disbursement processing system, in accordance with the preferred embodiment of the present invention, as shown in FIG. 4;

FIG. 18 is a flow diagram of a method for disbursement processing, in accordance with the embodiment of the invention shown in FIG. 17;

FIG. 19 is a block diagram of a disbursement processing system, in accordance with an alternative embodiment of the present invention, as shown in FIG. 3;

FIG. 20 is a flow diagram for a method of disbursement processing, in accordance with the embodiment of the invention shown in FIG. 19; and

FIG. 21 is a block diagram of a disbursement system, in accordance with another alternative embodiment of the present invention, as shown in FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Introduction

The system of a preferred embodiment of the invention avoids the inefficiencies and shortcomings of the prior art payment and disbursement methodologies by integrating the collection of payment and disbursement information by an employer and transmitting the information to an accumulator agency. The accumulator agency then processes the payment as a debit-based transaction and processes the

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disbursement as an addendum-based transaction. In this system, all parties benefit: the payor benefits by the availability of a simple method for payment and disbursement processing through an employer, the employer benefits by a fast and inexpensive method for transmitting payments and disbursements from an employee to a recipient, and the recipient benefits from the timely transmittal and receipt of a payment. The system is also beneficial to disbursement processors because the system allows for efficient transmittal of disbursement information without payment overhead.

A preferred system consistent with the invention comprises several components, including a collector, an accumulator agency, and an intermediary/recipient. From an initiator, the collector receives payment and disbursement information, which is initially stored at the collector. The collector maintains a database of payment and disbursement information pursuant to each initiator. The accumulator agency serves as a processing station between the collector and the recipient/intermediary. The accumulator agency receives the payment and disbursement information from the collector, verifies the validity of the information, and if valid, further processes the payment and disbursement. For payment processing, the accumulator agency transmits payments as debit-based transactions. For disbursement processing, the accumulator agency transmits disbursements as addendum-based transactions.

System

FIG. 1 shows a payment and disbursement system according to one embodiment of the present invention. System 100 includes initiator 110, collector 120, accumulator agency 130, debit-based payment processing 140, and addendum-based disbursement processing 150. Initiator 110, which is preferably an employee seeking to initiate a permissive payment and disbursement or an employee subject to a mandatory payment and disbursement, transacts with collector 120, which is preferably an employer. Collector 120 receives the payment and disbursement information from initiator 110, and collector 120 records the information in a database and transmits the information to accumulator agency 130. Accumulator agency 130 verifies and processes the payment and disbursement information. For payment processing, accumulator agency 130 transmits the payment according to debit-based payment processing 140. Debit-based payment processing 140 incorporates financial processing information. For disbursement processing, accumulator agency 130 transmits disbursement information according to addendum-based disbursement processing 150. Addendum-based disbursement processing 150 incorporates the non-financial information contained within the addendum.

FIG. 2 illustrates an embodiment of a debit-based payment processing system consistent with system 100 shown in FIG. 1. As shown in FIG. 2, debit-based payment processing system 200 includes collector 120, accumulator agency 130, accumulator agency's bank 210, automated clearing house (ACH) 220, collector's bank 230, intermediary/recipient's bank 240, and intermediary/recipient 250. As described in FIG. 1, collector 120 receives the payment and disbursement information, records the information in a database, and then transmits the information to accumulator agency 130. The transmission of this information occurs in the form of an addendum-based financial electronic data interchange (FEDI) file. Electronic data interchange (EDI) describes the computer to computer exchange of information from one entity to another using electronic communication, and electronic funds transfer (EFT) describes the exchange of an electronic payment

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using electronic communication. FEDI is a combination of an EDI disbursement information with an EFT electronic payment. Accumulator agency 130 receives the FEDI file, verifies the validity of the information in the file, and then records the information in a database. Following the validation of the FEDI file, accumulator agency 130 segregates the payment information and the disbursement information from the FEDI file. Accumulator agency 130 then sends the payment information to debit-based payment processing 140 and the disbursement information to addendum-based disbursement processing 150.

For the processing of the payment according to FIG. 2, accumulator agency 130 transmits an EDI addendum to intermediary/recipient 250, with data indicating that a payment has been made. Also, accumulator agency 130 transmits an EFT transaction to accumulator agency's bank 210. Notably, accumulator agency 130 may transmit any number of EFT transactions to accumulator agency's bank 210 for processing. For example, if a payment is due to an intermediary/recipient from 500 entities, accumulator agency 130 may transmit all 500 payments as one EFT transaction to accumulator agency's bank 210 for processing. In so doing, accumulator agency 130 not only utilizes an efficient means of transmitting an EFT transaction but also saves transaction costs by using a single EFT transaction. For example, accumulator agency 130 could transmit this single EFT transaction containing 500 payments using the CTX format, which provides for up to 9,999 payments.

Once accumulator agency's bank 210 receives the EFT transaction from accumulator agency 130, accumulator agency's bank 210 must process each of the individual debit-based transactions contained within the EFT transaction. Like accumulator agency 130, accumulator agency's bank 210 may also use various EFT formats for processing multiple payments through (ACH) 220. ACH 240 is a clearing house for processing financial transactions through the Federal Reserve system, such as, for example, the National Automated Clearinghouse Association (NACHA).

Following transmission of the payment information to ACH 220, ACH 220 then processes the debit-based transactions initiated by accumulator agency's bank 210. Because these transactions are debit-based transactions, ACH 220 performs merely two transactions. First, ACH 220 issues a debit against the payor of the payment, and second, ACH 220 issues a credit to the recipient of the transaction. Thus, for the debit-based transactions initiated by accumulator agency's bank 210, ACH 220 initiates a debit transaction to collector's bank 230 and a credit transaction to intermediary/recipient's bank 240. Again, like collector 120 and accumulator agency 130, ACH 220 may utilize various EFT formats for multiple transmissions of these electronic transactions. Once ACH 240 has completed these transactions, payment processing has occurred, as intermediary/recipient 250 has received payment in intermediary/recipient's bank 240 from collector 120.

FIG. 3 illustrates an embodiment of an addendum-based disbursement processing system consistent with system 100 shown in FIG. 1. As shown in FIG. 3, addendum-based disbursement processing system 300 includes intermediary 310, accumulator agency 130, disbursement 320, paper check 322, direct deposit 324, debit deposit 326, and recipient 330. As described in FIG. 1, collector 120 receives payment and disbursement information from initiator 110, records the information in a database, and then transmits the information to accumulator agency 130. The transmission of payment and disbursement information occurs via a FEDI file. Once accumulator agency 130 receives the FEDI file,

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and following verification, accumulator agency **130** records the information in a database and segregates the payment and the disbursement from the FEDI file. Accumulator agency **130** then processes the disbursement information according to addendum-based disbursement processing **150**.

For the processing of the disbursement according to FIG. **3**, intermediary **310** initially receives an EDI file from accumulator agency **130**, as shown in FIG. **2**. This EDI file contains information relating to the payment made by initiator **110** and requests instructions regarding the disbursement. Intermediary **310** then processes the information and determines whether a disbursement is to be made. If a disbursement is approved by intermediary **310**, intermediary **310** transmits another EDI file to accumulator agency **130** with instructions for the disbursement. Accumulator agency **130** then processes disbursement **320**. Disbursement **320** may include any of a number of several disbursement methods, including paper check **322**, direct deposit **324**, and debit deposit **326**. Accumulator agency **130** processes paper check **322** by the traditional methodology, by printing and mailing the check to recipient **330**. Accumulator agency **130** processes direct deposit **324** also through the traditional methods, by issuing the deposit by EFT. Accumulator agency **130** processes debit deposit **326** through any number of available options by issuing an EFT, including the creation of a debit deposit at a bank operated by a state agency or the creation of a debit deposit account at a bank operated by accumulator agency **130**. Whatever the methodology for disbursement, according to system **300**, disbursement **320** processes a disbursement to recipient **330** according to instructions provided to accumulator agency **130** from intermediary **310**.

FIG. **4** illustrates a preferred embodiment for a payment and disbursement system according to the present invention. System **400** depicts a payment and disbursement system for transmitting child support obligations from a non-custodial to a custodial parent through an employer. Of course, one skilled in the art will realize many alternative applications for this system.

As shown in FIG. **4**, system **400** anticipates that initiator **110** (in the case of the preferred embodiment, an employee) has already initiated a payment and disbursement. System **400** thus shows three alternatives for collector **120** (shown here as employer **410**) for initiating a payment and disbursement consistent with the invention. Employer **410** depicts alternative ways that an employer can initiate a payment and disbursement for an employee, illustrated as employer **412**, employer **414**, and employer **416**. Employer **412** has only one employee subject to a child support obligations, employer **414** has **200** employees subject to child support obligations, and employer **416** also has **200** employees subject to child support obligations. In the case of employer **412**, the FEDI file transmitted from employer **412** to accumulator agency **130** comprises the CCD+ format. As noted above, the CCD+ format provides for an EFT transaction plus an addendum, but the CCD+ format is limited to one addendum per transaction. Thus, employer **414** also utilizes the CCD+ format, but due to the limitations of this EFT format, employer **414** would be required to use **200** separate FEDI transactions in the CCD+ format. In contrast, employer **416** transmits all **200** transactions utilizing the CTX format. As noted above, the CTX format allows for the transmission of a payment with up to 9,999 addenda records. Employer **416** therefore saves both time and expense by using the CTX format. Whatever the format, once employer **410** transmits the necessary FEDI files, accumulator agency **130** receives the FEDI files from employer **410** and processes the payment and disbursement transactions.

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For payment processing according to system **400**, accumulator agency **130** transmits an EDI transaction to state **460** and an EFT transaction to accumulator agency's bank **210**. The EDI transaction from accumulator agency **130** to state **460** indicates that a payment has been made. The EFT (or FEDI) transaction from accumulator agency **130** to accumulator agency's bank **210** contains the payment information to initiate a payment from initiator **110** (that is, a non-custodial parent) to recipient **330** (that is, custodial parent **480**). As depicted in system **400**, state **460** comprises state A **462**, state B **464** and state C **466**. System **400** contains three representations of state **460** for purposes of describing three alternatives for payment and disbursement processing. For similar reasons, system **400** contains three representations of state bank **470**, including state A's bank **472**, state B's bank **474**, and state C's bank **476**, and accordingly, system **400** contains three representations of custodial parent **480**, including custodial parent A **482**, custodial parent B **484**, and custodial parent C **486**.

Continuing with payment processing according to system **400**, accumulator agency's bank **210** receives the payment information from accumulator agency **130** and processes the payment via ACH **220** as a debit-based transaction. In processing the debit-based transaction, ACH **220** issues a debit against employer's bank **440** and issues a credit to state bank **470**. In this manner, the payment is completed from initiator **110**, or the non-custodial parent, to state **460** via employer **410** for the benefit of recipient **330**, or custodial parent **480**. The particular steps associated with the processes of payment processing are described in connection of FIGS. **10–16**.

For disbursement processing according to system **400**, state **460** issues an EDI transaction to accumulator agency **130**, authorizing a disbursement to custodial parent **480**. Accumulator agency **130** then processes the disbursement **320** according to one of three methods, paper check **322**, direct deposit **324**, or debit deposit **326**. As shown in FIG. **4**, for a disbursement by paper check, state A **462** transmits an EDI file to accumulator agency **130**, authorizing a disbursement to custodial parent A **482**. Accumulator agency **130** then prints and issues a check directly to custodial parent A **482**. For a disbursement by direct deposit, state B **464** issues an EDI file to accumulator agency **130**, authorizing a disbursement to custodial parent B **484**. Accumulator agency **130** then issues an EFT transaction to accumulator agency's bank **210**, authorizing a direct deposit to custodial parent B **484**. Accumulator agency's bank **210** issues an EFT transaction to ACH **220**, initiating a direct deposit to custodial parent B **484**. Based on this instruction for a direct deposit, ACH **220** issues a debit transaction against state B's bank **474** and issues a credit transaction to custodial parent B's bank **490**, for the benefit of custodial parent B **484**. For a disbursement by debit deposit, state C transmits an EDI to accumulator agency **130**, authorizing a debit deposit to custodial parent C **486**. Accumulator agency **130** transmits an EFT transaction to accumulator agency's bank **210**, authorizing the creation of a debit deposit account to the benefit of custodial parent C **486**. Accumulator agency's bank **210** issues an EFT transaction to ACH **220**, providing for the creation of a debit deposit in state C's bank **476**. Once a debit deposit is created in state C's bank **476**, custodial parent C **486** may access the account and receive the disbursement. The particular steps associated with the processes of disbursement processing are described in connection with FIGS. **17–21**.

In the payment and disbursement system described in FIG. **4**, it should be noted that all the designations are

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exemplary. One skilled in the art would be able to recognize various implementations of system 400. For example, the reference to a state does not limit the scope of this invention to a state of the United States, but in the context of the preferred embodiment, the reference may apply to any local, regional, federal, or international governmental entity. In other embodiments, moreover, the reference to a state could even apply to a nongovernmental entity, such as, for example, a mutual fund, a bill payment center, or any other commercial entity. Indeed, all the designations in system 400 entail such broad applications in the context of payment and disbursement processing.

FIG. 5 illustrates one embodiment of collector 120 used in system 100 shown in FIG. 1. As shown in FIG. 5, collector 120 preferably includes collector terminal 500 equipped with conventional hardware, including central processing unit (CPU) 510, random access memory (RAM) 512, display memory 514, video interface circuit (VIC) 516, input/output controller (I/O) 518, data storage device (disk) 520, input device 530, display 540, external device 550, and optional network interface 560. Collector terminal 500 basically functions as a conventional data processor.

As shown in FIG. 5, CPU 510 is directly coupled to each of the other elements of collector terminal 500. CPU 510 executes program code (not shown) stored in one or more RAM 512 or disk 520 to carry out the functions and acts described in connection with collector terminal 500. CPU 510 preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as accumulation of a payment and disbursement, transmission of a payment and disbursement, and the processing and completion of a payment and disbursement. The processes performed by these modules are described in connection with FIGS. 10–21. CPU 510 interacts with RAM 512 and disk 520 to execute stored program code according to conventional data processing techniques.

As also shown in FIG. 5, input device 530 permits collector terminal 500 to receive payment and disbursement information about initiator 110 and, although shown as a single device, may comprise one or more data input devices of various types, such as an alphanumeric keyboard, a numeric keypad, a bar code scanner, a credit card reader, a disk drive, a memory, an electronic communication line, and a wireless transceiver. Input device 530 preferably transmits received information to CPU 510 for storage in disk 520. VIC 516 comprises a video driver sending signals to display 540 displaying either text or graphics based on the contents of display memory 514. Display 540 is preferably large enough to display information relating to payment and disbursement processing for initiators 110. External device 550 allows operability of other components with collector 120, such as, for example, a modem, a printer, a scanner, a photocopying device, or any other form of input or output device. Optional network interface 560 links CPU 510 to allow communication with other collector devices, such as multiple collector terminals 500.

As shown in FIG. 5, disk 520 preferably comprises a large capacity memory capable of maintaining FEDI file database 522 and EDI addenda database 524. FEDI file database 522 contains data pertaining to payment and disbursement information accumulated from initiators 110. The contents of FEDI file database 522 are transmitted to accumulator agency 130 for processing. EDI addenda database 524 contains the disbursement information from FEDI file database 522. Data contained in one or more of these databases 522 and 524 may be periodically updated from collectors 120 via input device 530, external device 550, or optional

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network interface 560. Samples of the records and their respective fields contained in databases 522 and 524 are shown in and described in connection with FIGS. 8A–8B and 9A–9B.

FIG. 6 illustrates one embodiment of accumulator agency 130 used in system 100 shown in FIG. 1. Accumulator agency 130 preferably comprises accumulator agency server 600 equipped with conventional hardware, including CPU 610, RAM 612, display memory 614, VIC 616, I/O 618, disk 620, input device 630, display 640, external device 650, and optional network interface 660. In general, elements of accumulator agency server 600 common to collector terminal 500 preferably operate in substantially the same manner as described above. Because accumulator agency server 600 may service one or more external devices 650, accumulator agency server 600 is preferably capable of interfacing with one or more collector terminals 500. Alternatively, accumulator agency server 600 130 may also interface with one or more collector terminals 500 via optional network interface 660.

As shown in FIG. 6, disk 620 preferably comprises a large capacity memory capable of maintaining FEDI file database 622, EFT debit database 624, and EDI addenda database 626. FEDI file database 622 contains data pertaining to the payment and disbursement information transmitted by collector terminals 500. Indeed, FEDI file database 622 contains data corresponding to FEDI file database 522. EFT debit database 624 contains the payment information from FEDI file database 622. EDI addenda database 626 contains the disbursement information from FEDI file database 622. Data contained in one or more of these databases 622, 624, and 626 may be periodically obtained and updated from collector terminals 500 via external device 650 or optional network interface 660. Samples of the records and their respective fields contained in databases 622, 624, and 626 are shown in and described in connection with FIGS. 8A–8B and 9A and 9B.

FIG. 7 illustrates one embodiment of intermediary/recipient 250 used in system 200 shown in FIG. 2. Intermediary/recipient 250 preferably comprises intermediary/recipient terminal 700 equipped with conventional hardware, including CPU 710, RAM 712, display memory 714, VIC 716, I/O 718, disk 720, input device 730, display 740, external device 750, and optional network interface 760. Again, elements of intermediary/recipient terminal 700 common to collector terminal 500 or accumulator agency server 600 preferably operate in substantially the same manner as described above. External device 750 or optional network interface 760 allows connectivity of intermediary/recipient terminal 700 to external computers or networks. In a preferred embodiment, one such external computer is accumulator agency server 600.

As shown in FIG. 7, disk 720 maintains EDI addenda database 721, EFT credit database 723, disbursement database 725, initiator database 727, and recipient database 729. EDI addenda database 721 contains the addendum information transmitted by accumulator agency server 600. Indeed, EDI addenda database 721 contains data corresponding to EDI addenda database 626. EFT credit database 723 contains the credit transactions transmitted from ACH 220. Disbursement database 725 contains information designating whether a disbursement will be authorized and transmitted to accumulator agency server 600. Initiator database 727 contains a listing of authorized initiators for payment transactions. Recipient database 729 contains a listing of the authorized recipients for the receipt of disbursements. Samples of the records and their respective fields contained

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in databases **721**, **723**, **725**, **727**, and **729** are shown in and described in connection with FIGS. **8A-8B** and **9A-9B**. Database Formats

Samples of the contents of FEDI file database **522**, EDI addenda database **524**, FEDI file database **622**, EFT debit database **624**, EDI addenda database **626**, EDI addenda database **721**, EFT credit database **723**, disbursement database **725**, initiator database **727**, and recipient database **729** are shown in FIGS. **8A-8B** and **9A-9B**. The specific data and fields illustrated in these figures represent only one embodiment of the records stored in the databases consistent with the invention. In most cases, the fields shown in FIGS. **8A-8B** and **9A-9B** are relatively straight forward and self-explanatory. In addition to the disclosed databases, the data and fields of these databases, as well as the number of databases, can be readily modified from the described embodiments, for example, to include more or fewer data fields.

FEDI file database **522** maintained in collector terminal **500** contains a listing of information relating to payments and disbursements for use by collector terminal **500**. FIGS. **8A** and **8B** illustrate a sample of the contents of FEDI file database **522**, with FIG. **5A** depicting a sample of the contents of a FEDI file in the CCD format and FIG. **8B** depicting a sample of a FEDI file in the CTX format.

As shown in FIG. **8A**, using the CCD format, FEDI file database **522** contains eleven fields with data element names corresponding to, for example, record type code, transaction code, receiving depository financial institution (DFI) identification, check digit, DFI account number, amount, identification number, receiving company name, discretionary data, addenda record indicator, and trace number. FIG. **8A** also indicates the attributes of each field. After the field row and the data element name row, the field inclusion requirement row indicates the requirements for each of the eleven fields, "M" indicating a mandatory element, "R" indicating a required element, and "O" indicating an optional element. The contents row indicates a sample structure for the contents of each field, and the link row indicates the length of characters available for each field. Finally, the position row indicates the position of the data element in the database record. The CCD format allows a database record of **94** characters.

For field **1**, located at position **01-01**, record type code allows a single character, which the example shows as a "6."

For field **2**, located at position **02-03**, transaction code encompasses two characters, which the example shows as requiring a numeric form.

For field **3**, located at position **04-11**, receiving DFI identification provides for 8 characters, which the example depicts in the form, "TTTTAAAA."

For field **4**, located at position **12-12**, check digit encompasses a single character, which the example shows as requiring a numeric form.

For field **5**, located at position **13-39**, DFI account number entails 17 characters, which the example shows as allowing any alphanumeric form.

For field **6**, located at position **30-39**, amount provides for a character length of 10, which the example shows as \$\$\$\$\$\$€€ (thus, allowing a numerical entry of 999,999.99 or below).

For field **7**, located at position **40-54**, identification number spans 15 characters, which the example shows as allowing any alphanumeric form.

For field **8**, located at position **55-76**, receiving company name encompasses 22 characters, which the example shows as allowing any alphanumeric form.

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For field **9**, located at position **77-76**, discretionary data involves only 2 characters, which the example shows as allowing any alphanumeric form.

For field **10**, located at position **79-79**, addenda record indicator allows a single character, which the example shows as requiring a numeric form.

For field **11**, located at position **80-94**, trace number encompasses a number of up to 15 characters, which the example shows as requiring a numeric form.

As shown in FIG. **8B**, using the CTX format, FEDI file database **522** may also contain thirteen fields with data element names corresponding to, for example, record type code, transaction code, receiving DFI identification, check digit, DFI account number, total amount, identification number, number of addenda records, receiving company name/ID number, reserved, discretionary data, addenda record indicator, and trace number. The CTX format also allows a database record of 94 characters. Indeed, the 13 fields of FIG. **8B** correspond to the fields described in FIG. **8A**, except that FIG. **8B** contains two additional fields, namely, number of addenda records (field **8**) and reserved (field **10**). For field **8**, located at position **55-58** of the addenda for the CTX format, number of addenda records encompasses 4 characters, which the example shows as requiring a numeric form; for field **10**, located at position **75-76** of the addenda for the CTX format, reserved provides for 2 characters, which the example indicates as "blank" due to the reserved status of this field. Otherwise, the fields of the CTX format correspond exactly to the fields of the CCD format. Indeed, both the CTX format and the CCD format contain 94 characters. Accordingly, FEDI file database **522** contains fields corresponding to either the CCD or CTX format, and in either case, the number of characters in the database for each record does not exceed **94**.

Notably, FIGS. **8A** and **8B** only depict the fields for the EFT-portion of the FEDI file. Accordingly, these fields for the CCD and CTX formats operate according to the Operating Rules and Guidelines of the National Automated Clearinghouse Association (NACHA), hereby incorporated by reference.

Also maintained in collector terminal **500**, EDI addenda database **524** contains a listing of the information relating to disbursements either authorized by or required from initiators **110**. As shown in FIGS. **8A** and **8B**, the addenda record indicator (field **10** for CCD, field **12** for CTX) designates the presence or absence of an addenda record in an FEDI file. If this flag is positive, FIG. **9A** illustrates a sample of the contents of such an addenda record. As shown in FIG. **9A**, an addenda record contains five fields with data element names corresponding to, for example, record type code, addenda type code, payment related information, addenda sequence number, and entry detail sequence number. The row structure of the addenda record depicted in FIG. **9A** corresponds to the structure and contents of the rows in FIGS. **8A-8B**. Of the five fields shown in FIG. **9A**, payment related information (field **3**) contains the pertinent disbursement information, in the context of EDI addenda database **524**.

FIG. **9B** illustrates a sample of the contents of EDI addenda database **524**, in its preferred implementation of a payment and disbursement processing system for child support payments. As shown in FIG. **9B**, EDI addenda database **524** contains records having fields with segment identifiers for deductions (DED) corresponding to, for example, application identifier DED01, case identifier DED02, pay date DED03, payment amount DED04, non-custodial parent social security number DED05, medical

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support indicator DED06, non-custodial parent name DED07, FIPS code DED08, an employment termination indicator DED09. Therefore, as shown in FIG. 9B, the addenda record for a child support payment contains nine segment identifiers.

Application identifier DED01 indicates the type of deduction being withheld from an employee's pay.

Case identifier DED02 is the case number or court order number that the child support receiving agency uses for the processing of payments and disbursements.

Pay date DED03 indicates the pay date or the date of income withholding from the non-custodial parent.

Payment amount DED04 indicates the amount of withholding from the pay of the non-custodial parent, which is paid to the child support receiving agency.

Non-custodial parent social security number DED05 provides the child support receiving agency with the social security number of the non-custodial parent.

Medical support indicator DED06 indicates whether the non-custodial parent has family medical insurance available through his or her employer.

Non-custodial parent name DED07 indicates the first seven letters of the last name of the non-custodial parent followed by at least three of the first three letters of his or her first name.

Federal information process standard (FIPS) code DED08 refers to the code used by the child support entity receiving the transaction, usually indicating the state and county of the child support entity.

Employment termination indicator DED09 is used to indicate to the child support enforcement agency that the non-custodial parent's employment has been terminated.

For the contents of an EDI addendum for child support payment and disbursement, FIG. 9B also indicates the mandatory and permissive attributes of each field. Attribute column 1 indicates the field requirement, "M" indicating a mandatory element and "O" indicating an optional element. Attribute column 2 indicates the data type, including "AN" for string type data, "DT" for date type data, "ID" for identifier data from a predefined list of values, and "N2" indicating a numeric type data with two decimal places to the right of a fixed decimal point (indicating a financial amount). Attribute column 3 indicates the minimum/maximum allowable length for the element, for example, 1/20 indicates a minimum of one character and a maximum of 20 characters.

Of course, the example of the addenda requirements for a child support payment and disbursement are only one implementation of a system consistent with the present invention. Other implementations for payment and disbursement processing may also be used, such as, for example, alimony payments, payments on a judgment, payments on an attachment, tax payments, or even permissive payments, such as, for example, payments for investments or a mutual fund, payments upon a loan, or any other form of private or commercial obligation.

FEDI file database 622 maintained in accumulator agency server 600 contains a listing of information corresponding to FEDI file database 522. FEDI file database 622 contains those FEDI files transmitted to accumulator agency server 600 by collector terminals 500. Following transmission of these FEDI files, accumulator agency server 600 then validates the information, and if valid, segregates the EFT information from the EDI information. EFT debit database 624 contains the EFT information obtained from FEDI file database 622, and EDI addenda database 626 contains the EDI information obtained from FEDI file database 622. As

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described above, FIGS. 8A and 8B show samples of EFT information, and FIGS. 9A and 9B show samples of EDI information. EFT debit database 624 and EDI addenda database 626 contain information consistent with that shown in and described in connection with FIGS. 8A-8B and 9A-9B.

EDI addenda database 721 maintained in intermediary/recipient terminals 700 contains a listing of disbursement information corresponding to the EDI information transmitted to intermediary/recipient terminal 700 from accumulator agency server 600, which was transmitted to accumulator agency server 600 from collector terminals 500. EDI addenda database 721 contains information similar to that contained within EDI addenda database 524 and EDI addenda database 626. FIGS. 9A and 9B show samples of EDI information. Intermediary/recipient terminal 700 receives EDI transactions into EDI addenda database 721 from accumulator agency server 600 in order to process disbursements according to the information contained within the EDI addenda.

EFT credit database 723 maintained in intermediary/recipient terminal 700 contains information relating to payments processed through accumulator agency's bank 210 and ACH 220 for the purpose of later distribution and processing. In an implementation pertaining to child support, once initiator 110, or a non-custodial parent, has issued a payment through employer 410 to custodial parent 480, EFT credit database 723 indicates to intermediary/recipient terminal 700 (such as a terminal at a state child support agency) that the non-custodial parent has paid the obligation. Once the payment has occurred, intermediary/recipient terminal 700 may then authorize the disbursement to custodial parent 480.

Disbursement database 725, initiator database 727, and recipient database 729 maintained in intermediary/recipient terminal 700 enable authorization of disbursements pursuant to the information contained within EDI addenda database 721. Initiator database 727 contains a listing of the authorized initiators for payment processing, recipient database 729 contains a listing of the authorized recipients for disbursement processing, and disbursement database 729 contains a listing of disbursements authorized for processing. EFT credit database 723 thus indicates to disbursement database 725 whether a disbursement is authorized. Once a disbursement is authorized under disbursement database 725, intermediary/recipient terminal 700 transmits such authorization to accumulator agency server 600. Disbursement database 725 may also contain a historical database of prior disbursements. In an implementation pertaining to child support, for example, initiator database 727 would contain a listing of initiators 110, or non-custodial parents, recipient database 729 would contain a listing of custodial parents 480, and disbursement database 729 would contain the information regarding payments due by the non-custodial parents to custodial parents for child support obligations.

Process

In processing a payment and disbursement from collector 120 (such as an employer) based on an obligation of initiator 110 (such as an employee), the system shown and described in connection with FIG. 1 preferably executes several distinct modules, or processes. These processes include facilitating the accumulation of a payment and disbursement at collector 120 from initiator 110, transmitting the payment and disbursement information from collector 120 to accumulator agency 130, processing the payment via debit-based payment processing 140, and processing the disbursement

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via addendum-based disbursement processing **150**. The steps associated with these processes are described in connection with FIGS. **10–21** and can be performed in any order, unless otherwise specified or dictated by the steps themselves.

In describing the processes consistent with the invention, various implementations of systems consistent with the invention are also described herein. For example, FIG. **10** illustrates a payment processing system consistent with the preferred embodiment of the invention as shown in FIG. **4**. FIGS. **11** and **12** depict flow diagrams illustrating the series of steps performed by system **1000** as shown in FIG. **10**. In initiating payment processing pursuant to the preferred embodiment, employer **410** (shown here as employers **412**, **414**, **416**) receives a withholding order from initiator **110** (here, a non-custodial parent/employee), authorizing employer **410** to withhold funds from salary regarding a child support obligation (step **1110**). If employer **410** receives a withholding order, the order will involve either a wage assignment income withholding or wage lien from a state agency or court ordering the withholding of funds from the salary of an employee pursuant to a child support obligation. Alternatively, an employee can also authorize an employer to withhold funds from his or her salary for a child support obligation. Whatever the form of authorization, once authorized, the employer converts the withholding obligation into a FEDI file (step **1120**). This FEDI file may contain a payment with addendum information regarding disbursement in either the CCD or CTX formats. The FEDI file preferably is in the CTX format for greater efficiency and cost savings. Following the creation of the FEDI file, the employer then transmits the FEDI file to accumulator agency **130** (step **1130**).

Once accumulator agency **130** receives the FEDI file from employer **410** (step **1202**), accumulator agency **130** validates the FEDI transmission (step **1205**). The validation of the FEDI transmission may include certification of the employer. In this certification process, accumulator agency **130** determines whether employer **410**, which transmitted the FEDI file, is registered with accumulator agency **130**. If employer **410** is not registered with accumulator agency **130**, the FEDI file is rejected (step **1210**). If employer **410** is registered with accumulator agency **130**, employer **410** is certified and processing of the FEDI file continues. Note that this certification step is only one of many possible certification steps pursuant to methods consistent with the invention. Other certification steps may include, for example, validation of the data contained within the FEDI file.

Following certification of the employer, accumulator agency **130** initiates two transmissions. On the one hand, accumulator agency **130** sends an EDI file to state **460** (shown here as state A **462**, state B **464**, and state C **466**) (step **1220**). This EDI file indicates to state **460** that a payment has been made by initiator **110** (or, an employee) via employer **410**. Once state **460** receives the EDI file, state **460** uses the information contained within the addendum and updates its records pertaining to the payment by the employee (step **1230**). On the other hand, accumulator agency **130** also periodically accumulates EFT files for subsequent transmission (step **1240**). Accumulator agency **130** preferably transmits EFT files by the use of a FEDI file. For example, using the CTX format, accumulator agency **130** can accumulate 9,999 EFT payment transactions for transmissions in a single FEDI file. Once accumulator agency **130** has created such a FEDI file, the file is transmitted to accumulator agency's bank **210** (step **1250**).

Upon receipt of the FEDI file from accumulator agency **130**, accumulator agency's bank **210** processes the payment

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transactions (step **1260**). If accumulator agency **130** transmitted a FEDI file, accumulator agency's bank **210** segregates and processes the payments, but if accumulator agency **130** transmitted a single EFT file, then accumulator agency's bank **210** simply processes the single payment transaction. Once accumulator agency's bank **210** has accumulated and processed the payment transactions received from accumulator agency **130**, accumulator agency's bank **210** then interacts with ACH **220**. As done by accumulator agency **130**, accumulator agency's bank **210** may also utilize FEDI when transacting with ACH **220**. Thus, accumulator agency's bank may periodically accumulate and transmit payment transactions in the form of a FEDI file in the CTX format to ACH **220**. Once ACH **220** receives the payment transaction information from accumulator agency's bank **210**, ACH **220** processes the payments as debit-based transactions. Accordingly, ACH **220** processes the payments as debit-based transactions by transmitting a debit transaction to employer's bank **440** (step **1280**) and transmitting a credit transaction to state bank **470** (step **1270**), such as, state A's bank **472**, state B's bank **474**, and state C's bank **476**. Following the processing of these transactions by ACH **220**, the payment obligation from employer's bank **440** is satisfied with regard to state **460**, for example, including state **463**, state **464** and state **466**.

Although the system and processes described by FIGS. **10–12** describe the preferred embodiment for the payment processing system shown in FIG. **4**, other implementations are also available. FIG. **13**, for example, illustrates an alternative embodiment for a payment processing system consistent with the invention. FIGS. **14–15** depict flow diagrams illustrating the series of steps performed by system **1300** as shown in FIG. **13**. Similar to system **1000** in FIG. **10** and the processes described in FIGS. **11–12**, system **1300** allows collectors **120** (shown here as collector **1312**, collector **1314**, and collector **1316**) to transmit payment information to accumulator agency **130** in alternative methods (step **1410**). In contrast to the system and methods described in FIGS. **10–12**, the system and methods consistent with this embodiment do not limit collector **120** to an employer. Otherwise, system **1300** and the associated methods operate similarly as system **1000** and its associated methods. Collectors **120** create a FEDI file (step **1420**) and transmit the FEDI file to accumulator agency **130** (step **1430**). Accumulator agency **130** then receives the FEDI file from collectors **120** (step **1502**) and performs certification (step **1505**).

If certification fails the FEDI file is rejected (step **1510**). If certification passes, accumulator agency **130** performs two steps. First, accumulator agency **130** sends an EDI file to intermediary/recipient **250** (step **1520**). Upon receipt of the EDI file, intermediary/recipient **250** updates its records regarding the payment described in the EDI file (step **1530**). In contrast to the system and methods described in FIGS. **10–12**, the system and methods consistent with this embodiment do not limit intermediary/recipient **250** to a state. However, to show that payment transaction can be processed to multiple recipients, system **1300** distinguishes intermediary/recipients **1322**, **1324**, **1326**. Second, accumulator agency accumulates EFT files from the FEDI files received from collectors **120** and periodically creates combined FEDI files for later transmission (step **1540**). Accumulator agency **130** then transmits the FEDI file to accumulator agency's bank **210** (step **1550**). Accumulator agency's bank **220** then receives the FEDI file from accumulator agency **130** and processes the payment as a debit-based transaction via ACH **220** (step **1560**). ACH **220** subsequently performs two transactions: ACH **220** processes

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a debit transaction to collector's bank 1310 (step 1580) and transmits a credit transaction to intermediary/recipient's bank 240, here designated as intermediary/recipient A's bank 1332, intermediary/recipient B's bank 1334, and intermediary/recipient C's bank 1336 (step 1570). Following these transactions, the payment obligation from intermediary/recipient's bank 240 is satisfied with regard to intermediary/recipient 250, for example, including intermediary/recipient A 1322, intermediary/recipient B 1324, and intermediary/recipient C 1326.

As described above, the system and methods associated with FIGS. 13–15 provide for a more dynamic payment processing system than the system and methods associated with FIGS. 10–12. The system and methods consistent herewith allow for payment processing of mandatory as well as permissive obligations. Also, the system and methods consistent herewith allow for payment processing from entities other than non-custodial parents, through entities other than states, and to entities other than custodial parents.

FIG. 16 illustrates another alternative embodiment for a payment processing system consistent with the invention. Similar to system 1300, described in FIG. 13, system 1600 operates in the same manner as the system and methods disclosed in FIGS. 13–15, except system 1600 allows accumulator agency 130 to transact directly with ACH 220. In short, system 1600 allows accumulator agency 130 to function as a bank.

In system 1600, collectors 120 (here shown as collector 1312, collector 1314, and collector 1316) transmits payment information to accumulator agency 130. Once accumulator agency 130 receives the FEDI file from collectors 120, following certification, accumulator agency 130 then sends an EDI file to intermediary/recipient 250, and accumulator agency 130 sends an FEDI file to a ACH 220. Notably, in contrast to the system and methods described by FIGS. 10–15, the system and methods consistent with FIG. 16 allow accumulator agency 130 to transact directly with ACH 220. In this manner, accumulator agency 130 functions as a bank. Following the transactions between ACH 220 and accumulator agency 130, ACH 220 processes the payments as debit-based transactions. In so doing, ACH 220 processes a debit transaction to collector's bank 1310 and transmits a credit transaction to intermediary/recipient's bank 240. Like the system and methods consistent with the embodiment of the invention associated with FIGS. 13–15, the system and methods consistent with FIG. 16 also provide for a more dynamic payment processing system. By allowing accumulator agency 130 to transact directly with ACH 220, transaction steps are omitted that allow for a more efficient and thus timely processing of payments. Of course, the omission of this one step includes but one of many changes that can be made to the systems and methods for payment processing consistent with the invention.

FIG. 17 illustrates a disbursement processing system consistent with the preferred embodiment of the invention as shown in FIG. 4. FIG. 18 depicts a flow diagram illustrating the series of steps performed by system 1700 as shown in FIG. 17. In transacting disbursement processing pursuant to the preferred embodiment, state 460 (here shown as state A 462, state B 464, and state C 466) computes the child support disbursement due to recipient 330 and transmits the disbursement information in an EDI file to accumulator agency 130 (step 1810). Accumulator agency 130 receives the EDI file from state 460 and processes the disbursement (step 1820). If the disbursement is a check (step 1825), accumulator agency 130 prints the check and transmits it directly to custodial parent 480 (step 1830). In system 1700,

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the issuance of a check by accumulator agency 130 is transmitted to custodial parent A 482. The issued check is drawn on the bank account of state 460. In system 1700, the check issued by accumulator agency 130 to custodial parent A 482 is drawn on state A's bank 472 (step 1835).

If the disbursement is not a check, accumulator agency 130 must process an electronic transaction for the disbursement (step 1840). To do so, accumulator agency 130 issues an EFT/FEDI transaction to accumulator agency's bank 210 (step 1842) and accumulator agency's bank then transmits the transaction to ACH 220 (step 1845). ACH 220 then transmits the EFT/FEDI transaction to state bank 470 (step 1850). If the EFT/FEDI transaction is for a direct deposit (step 1855), state bank 470 subsequently issues a direct deposit via ACH 220 (step 1860). In system 1700, the issuance of a direct deposit by accumulator agency 130 results in the transmission of a direct deposit to ACH 220. ACH 220 then processes the direct deposit to custodial parent B's bank 490. In so doing, ACH 220 issues a debit transaction to state B's bank 474 (step 1866) and issues a credit transaction to custodial parent B's bank 490 (step 1867). Thereby, custodial parent B 484 receives a disbursement in the form of a direct deposit (step 1868).

If disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit (step 1870). In establishing a debit deposit, accumulator agency 130 has the option of nowhere to locate the debit deposit account. In system 1700, accumulator agency 130 establishes the direct deposit account at state C's bank 476, by transmitting the debit deposit information via ACH 220. Thereby, custodial parent C 486 receives the disbursement in the form of a debit account at state C's bank 476 (step 1880). Alternatively, accumulator agency 130 can also establish a debit deposit account at accumulator agency's bank 210. Additionally, although not depicted in FIG. 18, the system and methods consistent with the preferred embodiment also contemplate the issuance of an invoice to custodial parent 480 for any disbursement (as indicated by the dotted line on FIG. 17).

Although the system and processes described by FIGS. 17–18 describe the preferred embodiment for the disbursement processing system shown in FIG. 4, other implementations are also available. FIG. 19, for example, illustrates an alternative embodiment for a disbursement processing system consistent with the invention. FIG. 20 depicts a flow diagram illustrating the series of steps performed by system 1900 as shown in FIG. 19. Similar to system 1700 in FIG. 17 and the processes described in FIG. 18, system 1900 enables intermediary 310 to compute a payment due to recipient 330 and to transmit the disbursement information in an EDI file to accumulator agency 130 (step 2010). In contrast to the system and methods described in FIGS. 17–18, the system and methods consistent with this embodiment do not limit intermediary 310 to a state. Otherwise, system 1900 and the associated methods operate similarly as system 1700 and its associated methods. Accumulator agency 130 receives the EDI file from intermediary 310 and processes the disbursement (step 2020). If the disbursement is a check (step 2025), accumulator agency 130 prints the check and transmits it directly to recipient 330 (step 2030). Again, in contrast to the system and methods described in FIGS. 17–18, the system and methods consistent with this embodiment do not limit recipient 330 to a custodial parent. However, to show that multiple disbursement transaction can be processed to multiple recipients, system 1900 distinguishes recipient A 1932, recipient B 1934, and recipient C 1936. As indicated in system 1900, the issuance of a check

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by accumulator agency 130 is transmitted to recipient A 1932. The issued check is drawn on the bank account of intermediary A's bank 1922. In system 1900, the check issued by accumulator agency 130 to recipient A 1932 is drawn on intermediary A's bank 1922 (step 2035).

If the disbursement is not a check, accumulator agency 130 must process an electronic transaction for the disbursement (step 2040). To do so, accumulator agency 130 issues an EFT/FEDI transaction to accumulator agency's bank 210 (step 2042) and accumulator agency's bank then transmits the transaction to ACH 220 (step 2045). ACH 220 then transmits the EFT/FEDI transaction to intermediary/recipient's bank 240 (step 2050). If the EFT/FEDI transaction is for direct deposit (step 2055), intermediary/recipient bank 240 subsequently issues a direct deposit via ACH 220 (step 2060). In system 1900, accumulator agency 130 issues a direct deposit to ACH 220, which results in the transmission of a direct deposit to intermediary B's bank 1924, which transacts with ACH 220 to process the direct deposit to recipient B's bank 1920. In so doing, ACH 220 issues a debit transaction to intermediary B's bank 1924 (step 2066) and issues a credit transaction to recipient B's bank 1920 (step 2067). Thereby, recipient B 1934 receives a disbursement in the form of a direct deposit (step 2068).

If disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit (step 2070). Similar to the system and methods described in FIGS. 17-18, in establishing a debit deposit, accumulator agency 130 has the option of where to locate the debit account. In system 1900, accumulator agency 130 establishes the direct deposit account at intermediary C's bank 1926, by transmitting the direct deposit information via ACH 220. Thereby, recipient C 1936 receives the disbursement in the form of a debit account at intermediary C's bank 1926 (step 2080). Alternatively, accumulator agency 130 can establish a debit deposit account at other locations, including accumulator agency's bank 210. Finally, although not depicted in FIG. 20, the system and methods consistent with this embodiment also contemplate the issuance of an invoice to recipient 330 for any disbursement (as indicated by the dotted line on FIG. 19).

As described above, the system and methods associated with FIGS. 19-20 provide for a more dynamic disbursement processing system than the system and methods associated with FIGS. 17-18. The system and methods consistent herewith allow for disbursement processing for mandatory as well as permissive obligations. Also, the system and methods allow for disbursement processing from entities other than non-custodial parents, through entities other than states, and to entities other than custodial parents.

FIG. 21 illustrates another alternative embodiment for a disbursement processing system consistent with the invention. Similar to system 1900 described in FIG. 19, system 2100 operates in the same manner as the system and methods disclosed in FIGS. 19-20, except system 2100 allows accumulator agency 130 to transact directly with ACH 220. In short, system 2100 allows accumulator agency 130 to function as a bank.

In system 2100 intermediary 310 (here shown as intermediary A 1912, intermediary B 1914, and intermediary C 1916) computes the disbursement due to recipient 330 and transmits the disbursement information in an EDI file to accumulator 130. Accumulator agency 130 receives the EDI file from intermediary 310 and processes the disbursement. If the disbursement is a check, accumulator agency 130 issues the check consistent with the system and methods disclosed for system 1700 in FIGS. 19-20.

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If the disbursement is not a check, accumulator agency 130 processes an electronic transaction for the disbursement by issuing an EFT/FEDI transaction directly to ACH 220. Notably, in contrast to the system and methods described by FIGS. 17-20, the system and methods consistent with FIG. 21 allowed accumulator agency 130 to transact directly with ACH 220. In this manner accumulator agency 130 functions as a bank. If the EFT/FEDI transaction is for a direct deposit, accumulator agency 130 issues a direct deposit via ACH 220. In system 2100, accumulator agency 130 issues a direct deposit to ACH 220, and in so doing, issues a debit transaction to accumulator agency 130 and issues a credit transaction to recipient B's bank 1920. Thereby, recipient B 1934 receives a disbursement in the form of a direct deposit. Alternatively, if the disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit. In establishing a debit deposit, accumulator agency 130 establishes a direct deposit account directly at accumulator agency 130. Thereby, accumulator agency 130 merely instructs recipient 1936 that a debit deposit account has been formed for its benefit. Although not depicted in FIG. 21, the system and methods consistent with this embodiment also contemplate the issuance of an invoice to recipient 330 for any disbursement (as indicated by the dotted line on FIG. 21).

Just as FIG. 16 describes a more dynamic payment processing system consistent with the invention by allowing accumulator agency 130 to function as a bank, the system and methods consistent with FIG. 21 enable the same advantages for a disbursement processing system. By allowing accumulator agency 130 to transact directly with ACH 220, transaction steps are omitted that allow for a more efficient and timely processing of disbursements. Of course, the omission of this one step includes but one of many changes that can be made to the systems and methods for disbursement processing consistent with the invention.

Conclusion

The systems consistent with the invention provide for more efficient and more economical methods for the processing of either or both payments and disbursements. The systems process payments using debit-based EFT and processes disbursements using addendum-based EDI. This improved payment and disbursement methodology provides many advantages over the current payment and disbursement technologies.

As described above, it will be apparent to those skilled in the art that various modifications and variations can be made in the processes of the present invention without departing from the spirit and scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention, provided they come within the scope of the appended claims and their equivalents. In this context, equivalents means each and every implementation for carrying out the functions recited in the claims, even if not explicitly described herein.

What is claimed is:

1. A method of accumulating a payment and processing a disbursement, comprising the steps, performed by a processor, of:

- initiating the payment with disbursement information from a payor to a payee through a collector;
- transferring to an accumulator agency the payment and the disbursement information from the collector;
- processing from the agency to a bank the payment as a debit transaction; and
- processing from the agency to an intermediary the disbursement information as an addendum transaction.

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2. The method of claim 1, wherein the transferring step occurs by financial electronic data interchange (FEDI).

3. The method of claim 1, wherein the step of processing the payment occurs by electronic funds transfer (EFT).

4. The method of claim 1, wherein the step of processing the disbursement information occurs by electronic data interchange (EDI).

5. A system for accumulating a payment and processing a disbursement, comprising:

an initiating component configured to initiate the payment with disbursement information from a payor to a payee through a collector;

a transferring component configured to transfer to an accumulator agency the payment and the disbursement information from the collector;

a payment processing component configured to process from the agency to a bank the payment as a debit transaction; and

a disbursement processing component configured to process from the agency to an intermediary the disbursement information as an addendum transaction.

6. The system of claim 5, wherein the transferring component occurs by financial electronic data interchange (FEDI).

7. The system of claim 5, wherein the payment processing component occurs by electronic funds transfer (EFT).

8. The system of claim 5, wherein the disbursement processing component occurs by electronic data interchange (EDI).

9. A computer usable medium having computer readable code embodied therein for causing a computer to accumulate a payment and process a disbursement, the computer usable code comprising:

an initiation module configured to initiate a payment with disbursement information from a payor to a payee through a collector;

a transfer module configured to transfer to an accumulator agency the payment and the disbursement information from the collector;

a payment module configured to process from the agency to a bank the payment as a debit transaction; and

a disbursement module configured to process from the agency to an intermediary the disbursement information as an addendum transaction.

10. The computer usable code of claim 9, wherein the transfer module occurs by financial electronic data interchange (FEDI).

11. The computer usable code of claim 9, wherein the payment module occurs by electronic funds transfer (EFT).

12. The computer usable code of claim 9, wherein the disbursement module occurs by electronic data interchange (EDI).

13. A method of processing a payment, comprising the steps, performed by a processor, of:

receiving payment information at a collector;

sending the payment information from the collector to an accumulator agency;

receiving at the accumulator agency payment information from the collector regarding the payment;

initiating by the accumulator agency the payment as a debit transaction;

executing the debit transaction from the accumulator agency through an automated clearing house (ACH); and

dispatching a credit reflecting the payment from the ACH to an intermediary's bank for the benefit of an intermediary.

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14. The method of claim 13, wherein the sending step occurs by the transmission of an addendum-based FEDI file.

15. The method of claim 13, wherein the initiating step occurs by an EFT transaction.

16. The method of claim 13, wherein the initiating step occurs by an FEDI transaction.

17. The method of claim 13, wherein the initiating step occurs through an accumulator agency's bank.

18. The method of claim 13, further comprising the step of:

processing the debit transaction from the ACH to a collector's bank.

19. A system for processing a payment, comprising:

a first receiving component configured to receive payment information at a collector;

a sending component configured to send the payment information from the collector to an accumulator agency;

a second receiving component configured to receive at the accumulator agency payment information from the collector regarding the payment;

an initiating component configured to initiate by the accumulator agency the payment as a debit transaction;

an executing component configured to execute the debit transaction from the accumulator agency through an automated clearing house (ACH); and

a dispatching component configured to dispatch a credit reflecting the payment from the ACH to an intermediary's bank for the benefit of an intermediary.

20. The system of claim 19, wherein the sending component occurs by the transmission of an addendum-based FEDI file.

21. The system of claim 19, wherein the initiating component occurs by an EFT transaction.

22. The system of claim 19, wherein the initiating component occurs by an FEDI transaction.

23. The system of claim 19, wherein the initiating component occurs through an accumulator agency's bank.

24. The system of claim 19, further comprising:

a processing component configured to process the debit transaction from the ACH to a collector's bank.

25. A computer usable medium having computer readable code embodied therein for causing a computer to process a payment, the computer usable code comprising:

a first receiving module configured to receive payment information at a collector;

a sending module configured to send the payment information from the collector to an accumulator agency;

a second receiving module configured to receive at the accumulator agency payment information from the collector regarding the payment;

an initiating module configured to initiate by the accumulator agency the payment as a debit transaction;

an executing component configured to execute the debit transaction from the accumulator agency through an automated clearing house (ACH); and

a dispatching component configured to dispatch a credit reflecting the payment from the ACH to an intermediary's bank for the benefit of an intermediary.

26. A method of processing a disbursement, comprising the steps, performed by a processor, of:

transmitting by an accumulator agency disbursement information to a state;

receiving at the accumulator agency disbursement transaction information from the state regarding authorization for the disbursement as an addendum transaction; and

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executing the disbursement to a recipient.

27. The method of claim 26, wherein the transmitting step occurs by an addendum-based EDI transaction.

28. The method of claim 26, wherein the executing step includes the substep of paying the recipient via one of paper check, direct deposit, and debit deposit.

29. The method of claim 26, further comprising the step of:

issuing an invoice for the disbursement.

30. A system for processing a disbursement, comprising:
a transmitting component configured to transmit by an accumulator agency disbursement information to a state;

a receiving component configured to receive at the accumulator agency disbursement transaction information from the state regarding authorization for the disbursement as an addendum transaction; and

an executing component configured to execute the disbursement to a recipient.

31. The system of claim 30, wherein the transmitting component occurs by an addendum-based EDI transaction.

32. The system of claim 30, wherein the executing component further includes a paying component configured to pay the recipient via one of paper check, direct deposit, and debit deposit.

33. The system of claim 30, further comprising an issuing component configured to issue an invoice for the disbursement.

34. A computer usable medium having computer readable code embodied therein for causing a computer to process a disbursement, the computer usable code comprising:

a transmitting module configured to transmit by an accumulator agency disbursement information to a state;

a receiving module configured to receive at the accumulator agency disbursement transaction information from the state regarding authorization for the disbursement as an addendum transaction; and

an executing module configured to execute the disbursement to a recipient.

35. A method of processing a disbursement, comprising the steps, performed by a processor, of:

receiving at an accumulator agency disbursement transaction information from a state regarding the disbursement as an addendum transaction; and

executing the disbursement to a recipient.

36. The method of claim 35, wherein the receiving step occurs by an EDI transaction.

37. The method of claim 35, wherein the disbursement is a child support disbursement.

38. The method of claim 35, wherein the disbursement is an alimony disbursement.

39. The method of claim 35, wherein the disbursement is a disbursement based on a judgment.

40. The method of claim 35, wherein the disbursement is a disbursement based on an attachment.

41. The method of claim 35, wherein the recipient is a custodial parent.

42. The method of claim 35, further comprising the step of:

transmitting an invoice for the disbursement to the recipient.

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43. The method of claim 35, wherein the receiving step further includes the substep of paying the recipient via one of paper check, direct deposit, and debit deposit.

44. The method of claim 43, further comprising the step of:

initiating by the accumulator agency the debit deposit through the accumulator agency.

45. The method of claim 43, further comprising the step of:

establishing by the accumulator agency the debit deposit at a bank of the recipient's choice.

46. The method of claim 43, further comprising the step of:

initiating by the accumulator agency the debit deposit through a bank.

47. The method of claim 46, further comprising the step of: establishing by the accumulator agency the debit deposit at the accumulator agency's bank.

48. The method of claim 46, further comprising the step of:

establishing by the accumulator agency the debit deposit at the state's bank.

49. The method of claim 43, further comprising the step of:

initiating by the accumulator agency the direct deposit through a bank.

50. The method of claim 49, further comprising the step of:

executing the direct deposit from the bank through an ACH.

51. The method of claim 50, further comprising the step of:

processing the direct deposit from the ACH to a recipient's bank.

52. The method of claim 51, further comprising the step of:

dispatching a credit reflecting the direct deposit from the ACH to the recipient's bank for the benefit of the recipient.

53. A system for processing a disbursement, comprising:
a receiving component configured to receive at an accumulator agency disbursement transaction information from a state regarding the disbursement as an addendum transaction; and

an executing component configured to execute the disbursement to a recipient.

54. The system of claim 53, wherein the receiving component occurs by an EDI transaction.

55. The system of claim 53, wherein the disbursement is a child support payment.

56. The system of claim 53, wherein the disbursement is an alimony disbursement.

57. The system of claim 53, wherein the disbursement is a disbursement based on a judgment.

58. The system of claim 53, wherein the disbursement is a disbursement based on an attachment.

59. The system of claim 53, wherein the recipient is a custodial parent.

60. The system of claim 53, further comprising:

a transmitting component configured to transmit an invoice for the disbursement to the recipient.

61. The system of claim 53, wherein the receiving component further includes a paying component configured to pay the recipient via one of paper check, direct deposit, and debit deposit.

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62. The system of claim 61, further comprising:
a direct initiating component configured to initiate by the
accumulator agency the debit deposit through the accu-
mulator agency.
63. The system of claim 61, further comprising: 5
a choice establishing component configured to establish
by the accumulator agency the debit deposit at a bank
of the recipient's choice.
64. The system of claim 61, further comprising: 10
a debit initiating component configured to initiate by the
accumulator agency the debit deposit through a bank.
65. The system of claim 64, further comprising:
a debit establishing component configured to establish by
the accumulator agency the debit deposit at the accu- 15
mulator agency's bank.
66. The system of claim 64, further comprising:
a state establishing component configured to establish by
the accumulator agency the debit deposit at the state's
bank.

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67. The system of claim 61, further comprising:
a deposit initiating component configured to initiate by
the accumulator agency the direct deposit through a
bank.
68. The system of claim 67, further comprising:
a deposit executing component configured to execute the
direct deposit from the bank through an ACH.
69. The system of claim 68, further comprising:
a deposit processing component configured to process the
direct deposit from the ACH to a recipient's bank.
70. The system of claim 69, further comprising:
a deposit dispatching component configured to dispatch a
credit reflecting the direct deposit from the ACH to the
recipient's bank for the benefit of the recipient.

* * * * *

(12) **EX PARTE REEXAMINATION CERTIFICATE** (5900th)
United States Patent
Polk
(10) **Number:** **US 6,119,107 C1**
(45) **Certificate Issued:** ***Sep. 25, 2007**

(54) **METHOD AND APPARATUS FOR PAYMENT PROCESSING USING DEBIT-BASED ELECTRONIC FUNDS TRANSFER AND DISBURSEMENT PROCESSING USING ADDENDUM-BASED ELECTRONIC DATA INTERCHANGE**

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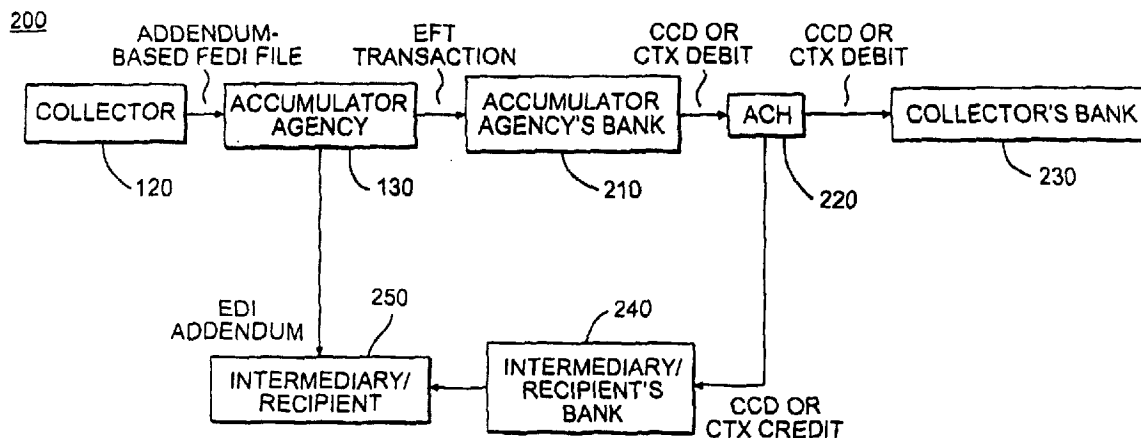
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(57) **ABSTRACT**

This disclosure describes a payment and disbursement system, wherein an initiator authorizes a payment and disbursement to a collector and the collector processes the payment and disbursement through an accumulator agency. The accumulator agency processes the payment as a debit-based transaction and processes the disbursement as an addendum-based transaction. The processing of a debit-based transaction generally occurs by electronic funds transfer (EFT) or by financial electronic data interchange (FEDI). The processing of an addendum-based transaction generally occurs by electronic data interchange (EDI).



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**EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307**

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claims 1, 5, 9, 13, 14, 17–20, 23–26, 30, 34–36, 53 and 54 are determined to be patentable as amended.

Claims 2–4, 6–8, 10–12, 15, 16, 21, 22, 27–29, 31–33, 37–52 and 55–70, dependent on an amended claim, are determined to be patentable.

1. A method *by an accumulator agency* of accumulating a payment *through a bank* and processing a disbursement to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising the steps, performed by a processor, of:

initiating at the accumulator agency the payment with disbursement information from a payor to a payee through a collector;

transferring to [an] the accumulator agency the payment and the disbursement information from the collector; processing from the accumulator agency to [a] the bank the payment as a debit transaction; and

processing from the accumulator agency to [an intermediary] the state the disbursement information as an addendum transaction.

5. A system at an accumulator agency for accumulating a payment *through a bank* and processing a disbursement to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising:

an initiating component configured to initiate at the accumulator agency the payment with disbursement information from a payor to a payee through a collector;

a transferring component configured to transfer to [an] the accumulator agency the payment and the disbursement information from the collector;

a payment processing component configured to process from the accumulator agency to [a] the bank the payment as a debit transaction; and

a disbursement processing component configured to process from the accumulator agency to [an intermediary] the state the disbursement information as an addendum transaction.

9. A computer usable medium having computer readable code embodied therein for causing a computer at an accumulator agency to accumulate a payment *through a bank* and process a disbursement to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, the computer usable code comprising:

an initiation module configured to initiate at the accumulator agency a payment with disbursement information from a payor to a payee through a collector;

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a transfer module configured to transfer to [an] the accumulator agency the payment and the disbursement information from the collector;

a payment module configured to process from the accumulator agency to [a] the bank the payment as a debit transaction; and

a disbursement module configured to process from the accumulator agency to [an intermediary] the state the disbursement information as an addendum transaction.

13. A method *by an accumulator agency* of processing a payment *through an accumulator agency's bank* for the benefit of a governmental state entity of the United States with a state's bank, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities, comprising the steps, performed by a processor, of:

receiving at the accumulator agency a notification of payment information received at a collector;

sending the payment information [from the collector] to [an] the accumulator agency from the collector;

receiving at the accumulator agency payment information from the collector regarding the payment;

initiating by the accumulator agency the payment as a debit transaction *through the accumulator agency's bank*;

executing the debit transaction [from the accumulator agency] through an automated clearing house (ACH), pursuant to instructions by the accumulator agency *through the accumulator agency's bank*; and

dispatching a credit reflecting the payment from the ACH to [an intermediary's] the state's bank for the benefit of [an intermediary] the state, pursuant to instructions by the accumulator agency *through the accumulator agency's bank*.

14. The method of claim 13, wherein the [sending] causing the transfer step occurs by the transmission of an addendum-based FEDI file.

17. The method of claim 13, wherein the [initiating step occurs through an accumulator agency's bank] state is a state agency.

18. The method of claim 13, further comprising the step of:

processing the debit transaction from the ACH to a collector's bank, *pursuant to instructions by the accumulator agency through the accumulator agency's bank*.

19. A system at an accumulator agency for processing a payment *through an accumulator agency's bank* for the benefit of a governmental state entity of the United States with a state's bank, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate agencies, comprising:

a first receiving component configured to receive at the accumulator agency a notification of payment information received at a collector;

a sending component configured to send the payment information from the collector to [an] the accumulator agency;

a second receiving component configured to receive at the accumulator agency payment information from the collector regarding the payment;

an initiating component configured to initiate by the accumulator agency the payment as a debit transaction *through the accumulator agency's bank*;

an executing component configured to execute the debit transaction from the accumulator agency through an

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automated clearing house (ACH), *pursuant to instructions by the accumulator agency through the accumulator agency's bank*; and

a dispatching component configured to dispatch a credit reflecting the payment from the ACH to an intermediary's bank for the benefit of **[an intermediary]** *the state, pursuant to instructions by the accumulator agency through the accumulator agency's bank.*

20. The system of claim 19, wherein the **[sending]** *causing* component occurs by the transmission of an addendum-based FEDI file.

23. The system of claim 19, wherein the **[initiating component occurs through an accumulator agency's bank]** *state is a state agency.*

24. The system of claim 19, further comprising:

a processing component configured to process the debit transaction from the ACH to a collector's bank, *pursuant to instructions by the accumulator agency through the accumulator agency's bank.*

25. A computer usable medium having computer readable code embodied therein for causing a computer *at an accumulator agency* to process a payment *through an accumulator agency's bank for the benefit of a governmental state entity of the United States with a state's bank, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities,* the computer usable code comprising;

a first receiving module configured to receive *at the accumulator agency a notification of payment information received at a collector*;

a sending module configured to send the payment information **[from the collector]** to **[an]** *the accumulator agency from the collector*;

a second receiving module configured to receive at the accumulator agency payment information from the collector regarding the payment;

an initiating module configured to initiate by the accumulator agency the payment as a debit transaction *through the accumulator agency's bank*;

an executing component configured to execute the debit transaction from the accumulator agency through an automated clearing house (ACH), *pursuant to instructions by the accumulator agency through the accumulator agency's bank*; and

a dispatching component configured to dispatch a credit reflecting the payment from the ACH to an intermediary's bank for the benefit of **[an intermediary]** *the state, pursuant to instructions by the accumulator agency through the accumulator agency's bank.*

26. A method by an accumulator agency with an accumulator agency's bank of processing a disbursement via a governmental state entity of the United States with a state's bank to a recipient, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities, comprising the steps, performed by a processor, of:

transmitting by an accumulator agency disbursement information to **[a]** *the state*;

receiving at the accumulator agency disbursement transaction information from the state regarding authorization for the disbursement as an addendum transaction; and

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executing by the accumulator agency the disbursement to a recipient.

30. A system at an accumulator agency for processing a disbursement via a governmental state entity of the United States with a state's bank to a recipient, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities, comprising:

a transmitting component configured to transmit by an accumulator agency disbursement information to **[a]** *the state*;

a receiving component configured to receive at the accumulator agency disbursement transaction information from the state regarding authorization for the disbursement as an addendum transaction; and

an executing component configured to execute by the accumulator agency the disbursement to a recipient.

34. A computer usable medium having computer readable code embodied therein for causing a computer at an accumulator agency to process a disbursement via a governmental state entity of the United States with a state's bank to a recipient, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities, the computer usable code comprising:

a transmitting module configured to transmit by an accumulator agency disbursement information to **[a]** *the state*;

a receiving module configured to receive at the accumulator agency disbursement transaction information from the state regarding authorization for the disbursement as an addendum transaction; and

an executing module configured to execute by the accumulator agency the disbursement to a recipient.

35. A method by an accumulator agency with an accumulator agency's bank of processing a disbursement via a governmental state entity of the United States with a state's bank to a recipient, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities, comprising the steps, performed by a processor, of:

receiving at an accumulator agency disbursement transaction information from **[a]** *the state* regarding the disbursement as an addendum transaction; and

executing by the accumulator agency the disbursement to a recipient.

36. The method of claim 35, wherein the **[receiving step occurs by an EDI transaction]** *recipient is the state.*

53. A system at an accumulator agency for processing a disbursement via a governmental state entity of the United States with a state's bank to a recipient, wherein the accumulator agency, the accumulator agency's bank, the state, and the state's bank are separate entities, comprising:

a receiving component configured to receive at an accumulator agency disbursement transaction information from **[a]** *the state* regarding the disbursement as an addendum transaction; and

an executing component configured to execute by the accumulator agency the disbursement to a recipient.

54. The system of claim 53, wherein the **[receiving component occurs by an EDI transaction]** *recipient is the state.*

* * * * *

EXHIBIT C

(12) **United States Patent**
Polk

(10) **Patent No.:** **US 7,225,155 B1**
(45) **Date of Patent:** **May 29, 2007**

(54) **METHOD AND APPARATUS FOR PAYMENT PROCESSING USING DEBIT-BASED ELECTRONIC FUNDS TRANSFER AND DISBURSEMENT PROCESSING USING ADDENDUM-BASED ELECTRONIC DATA INTERCHANGE**

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(75) Inventor: **John Polk**, McLean, VA (US)

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(73) Assignee: **ACS State & Local Solutions, Inc.**,
Teaneck, NJ (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **09/413,862**

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(22) Filed: **Oct. 7, 1999**

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Related U.S. Application Data

(Continued)

(60) Continuation of application No. 09/003,941, filed on Jan. 7, 1998, now Pat. No. 6,119,107, which is a division of application No. 08/941,187, filed on Sep. 30, 1997, now Pat. No. 5,946,669.

Primary Examiner—Hani M. Kazimi
Assistant Examiner—Stefano Karmis

(51) **Int. Cl.**
G06Q 40/00 (2006.01)

(74) *Attorney, Agent, or Firm*—Finnegan, Henderson, Farabow, Garrett & Dunner, LLP

(52) **U.S. Cl.** **705/40; 705/35; 705/39; 726/26**

(57) **ABSTRACT**

(58) **Field of Classification Search** 705/1, 705/35, 40, 44, 39; 902/41; 726/26
See application file for complete search history.

This disclosure describes a payment and disbursement system, wherein an initiator authorizes a payment and disbursement to a collector and the collector processes the payment and disbursement through an accumulator agency. The accumulator agency processes the payment as a debit-based transaction and processes the disbursement as an addendum-based transaction. The processing of a debit-based transaction generally occurs by electronic funds transfer (EFT) or by financial electronic data interchange (FEDI). The processing of an addendum-based transaction generally occurs by electronic data interchange (EDI).

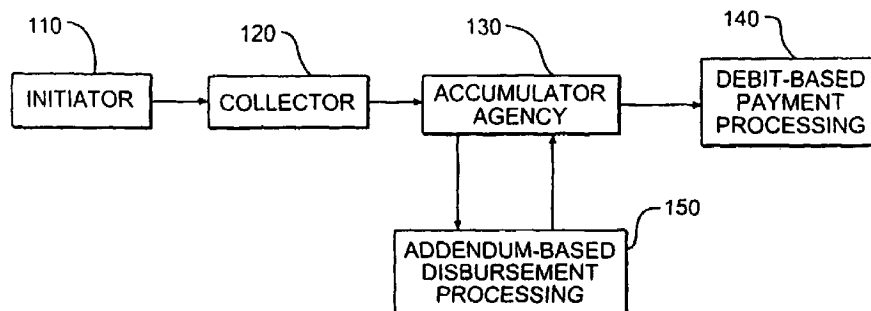
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U.S. District Court, District of Minnesota Civ. Action No. 02-CV-1321 DWF/JSM: *Pay Child Support Online Inc. v. ACS State & Local Solutions, Inc.*, Memorandum Opinion and Order, 22 pages, Apr. 5, 2004 (Exhibit I).

* cited by examiner

100

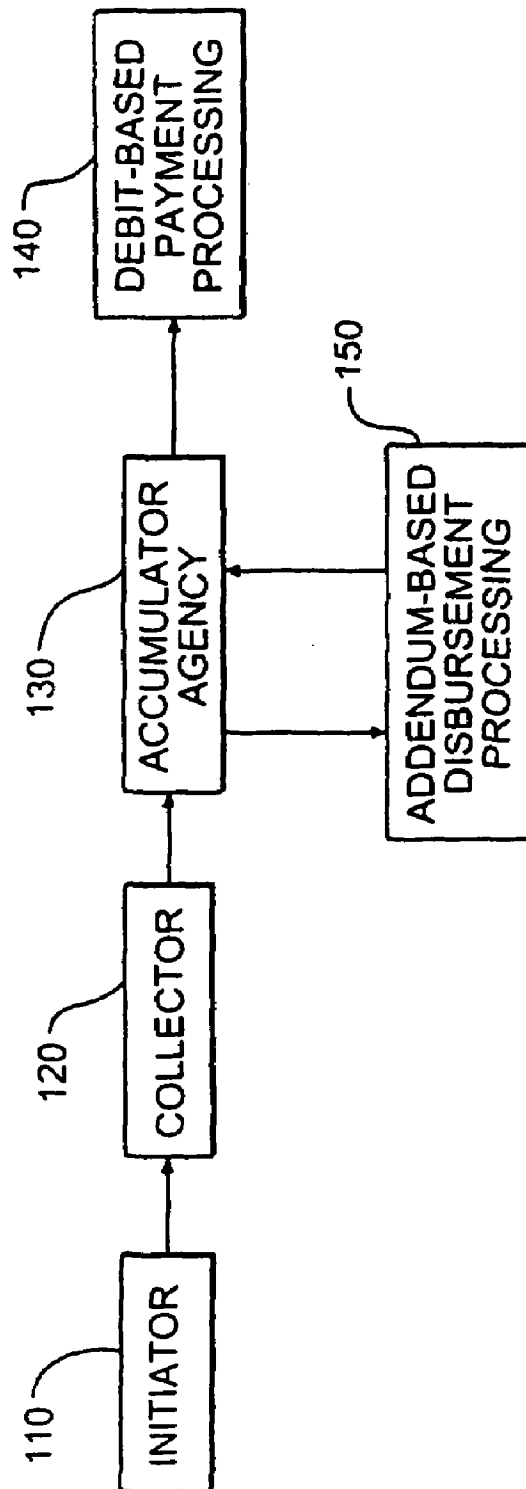


FIG. 1

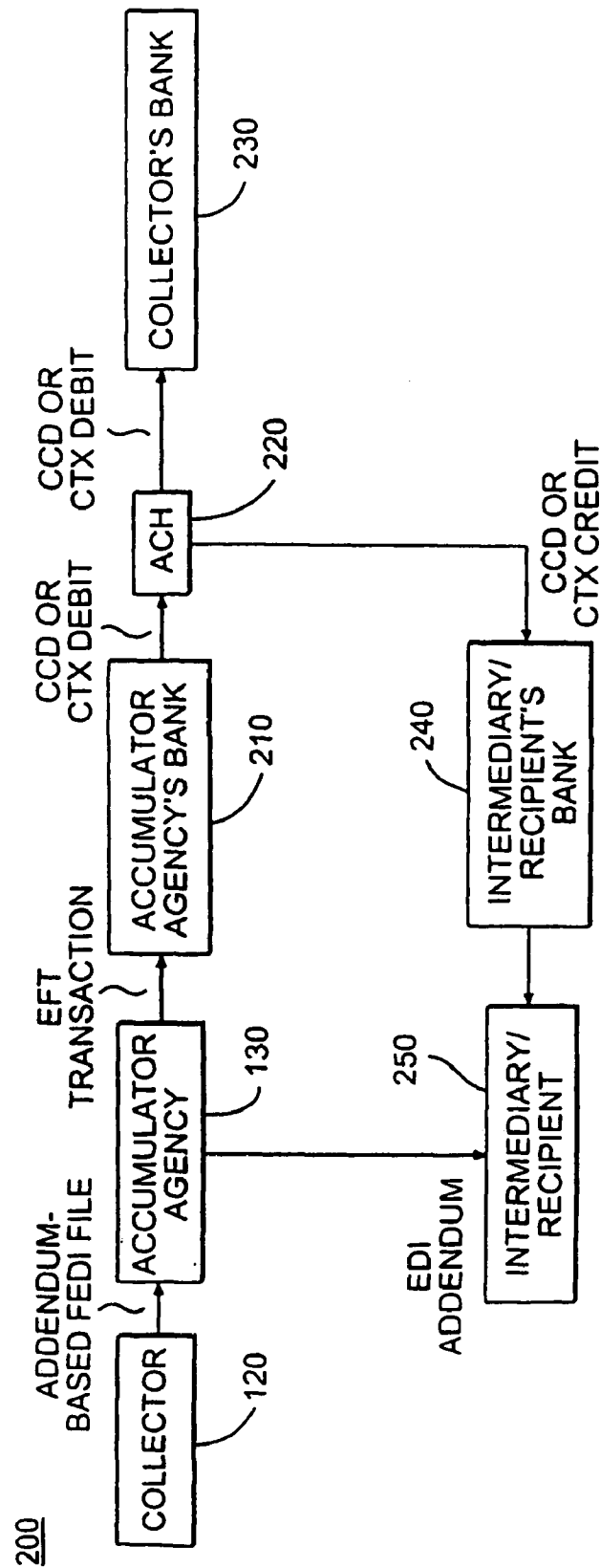


FIG. 2

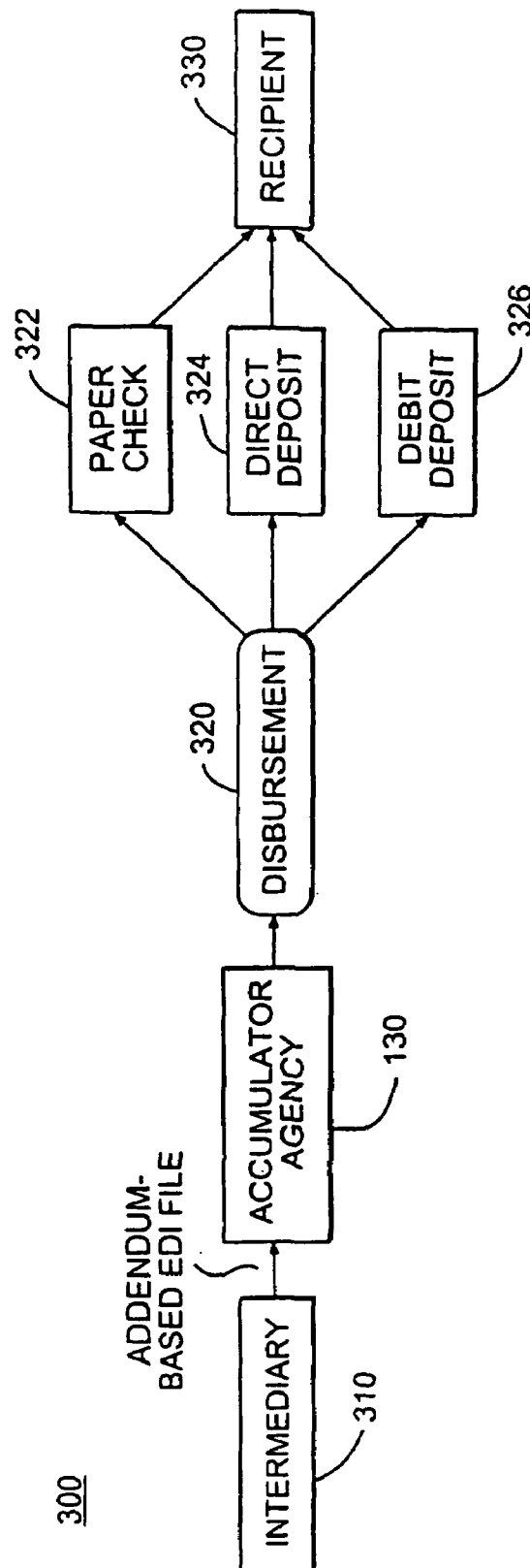


FIG. 3

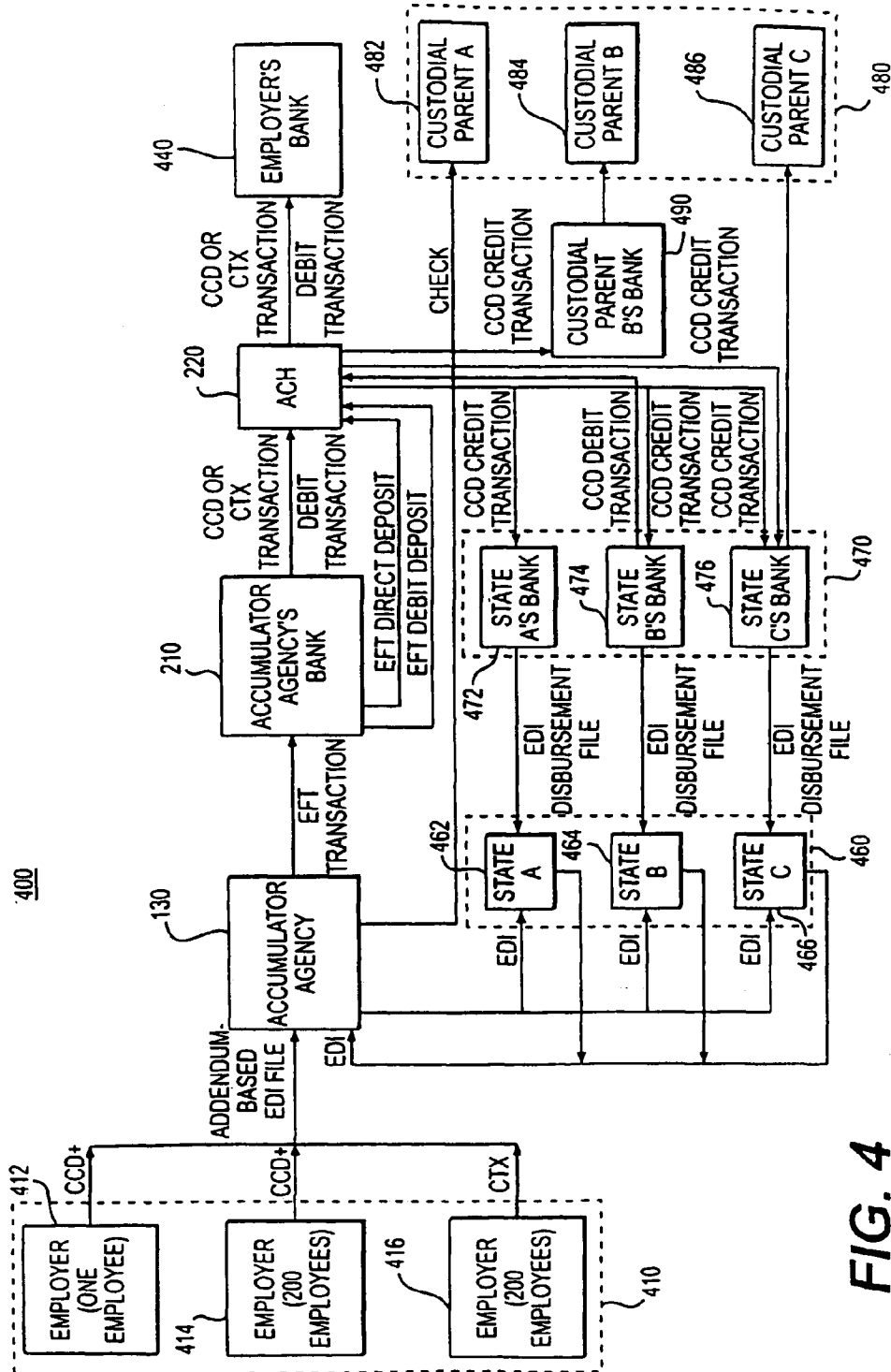


FIG. 4

120

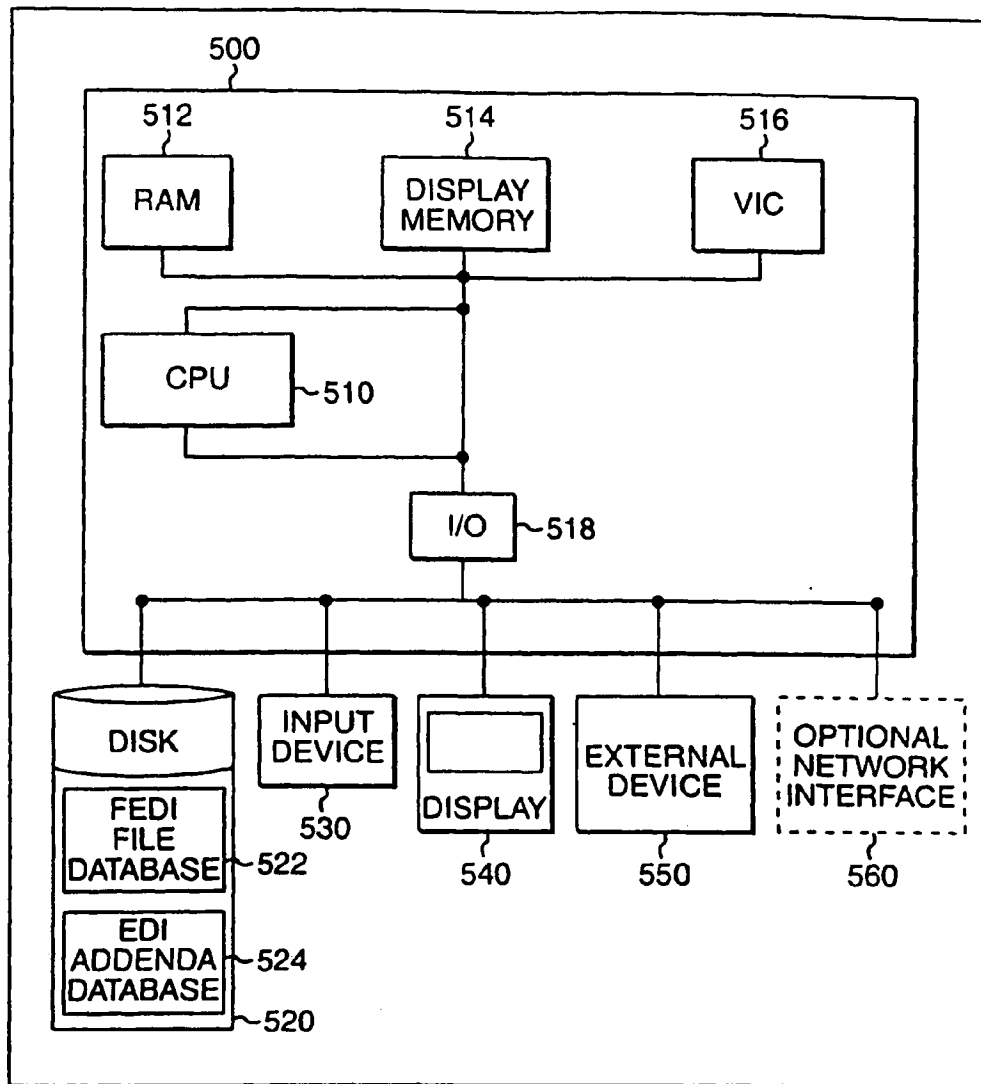


FIG. 5

130

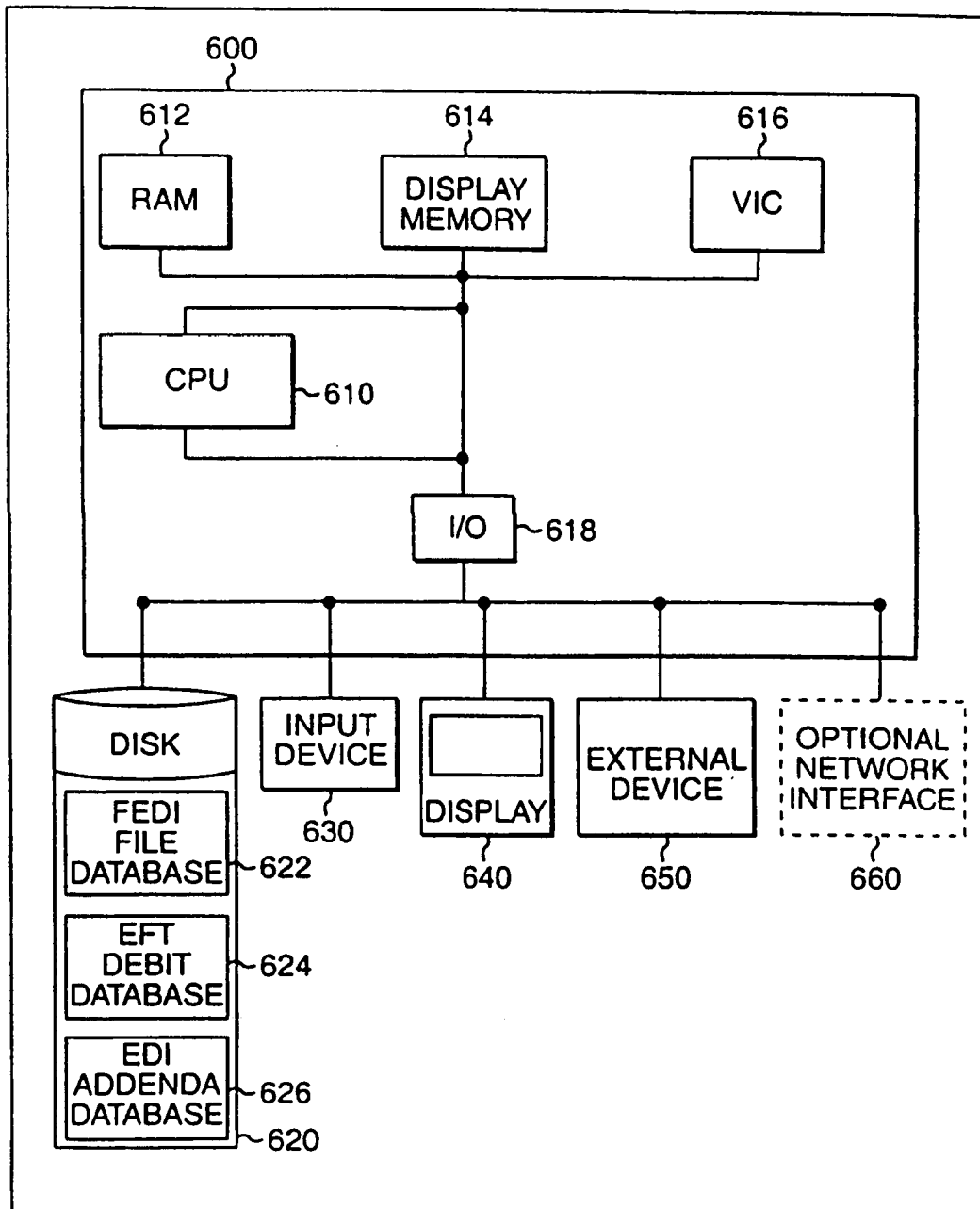
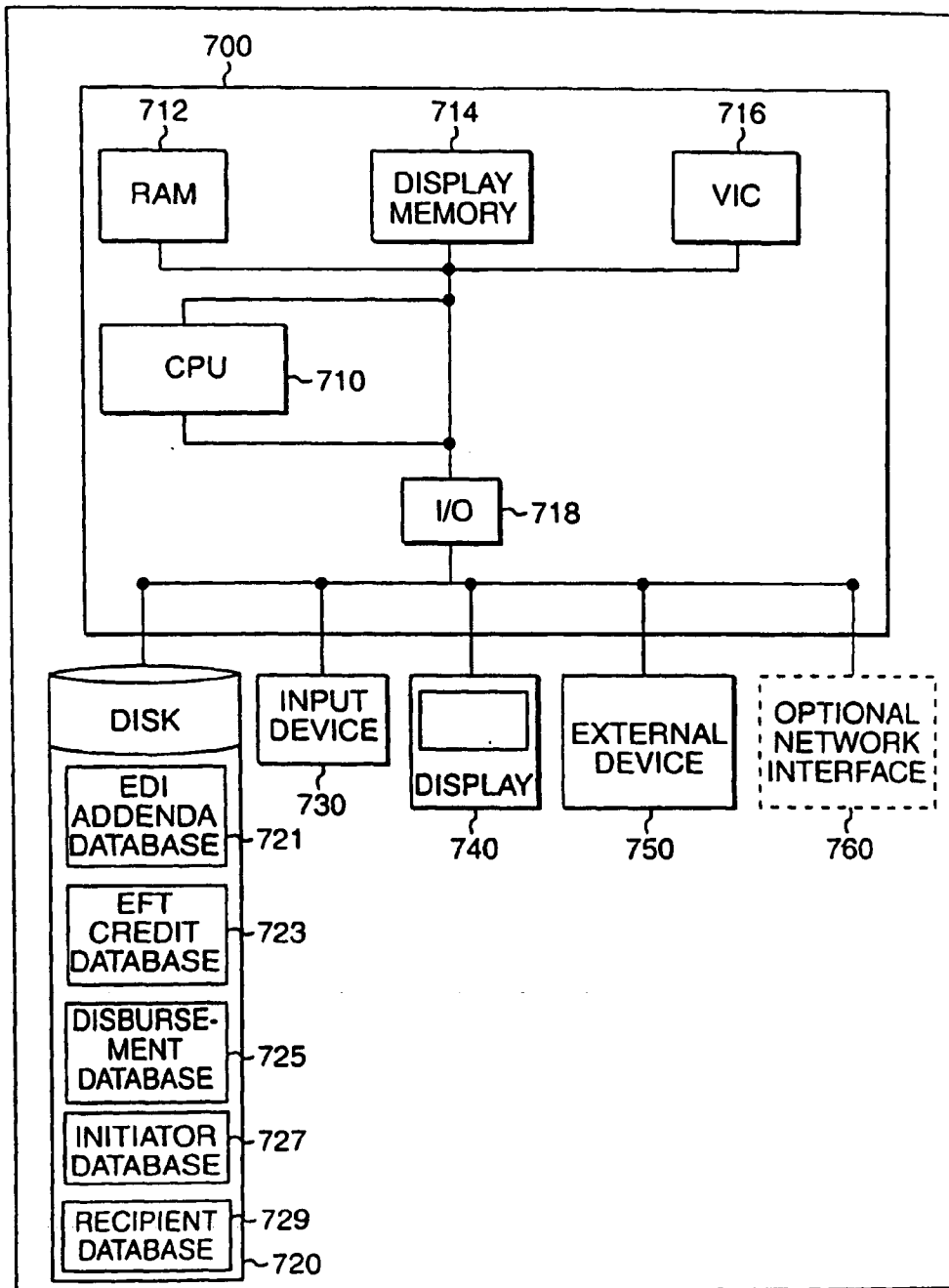


FIG. 6

250

**FIG. 7**

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FIELD	1	2	3	4	5	6	7	8	9	10	11
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	AMOUNT	IDENTIFICATION NUMBER	RECEIVING COMPANY NAME	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
FIELD INCLUSION REQUIREMENT	M	M	M	M	R	M	O	R	O	M	M
CONTENTS	'6'	NUMERIC	TTTTAAAA	NUMERIC	ALPHANUMERIC	\$\$\$\$\$\$\$\$##	ALPHANUMERIC	ALPHANUMERIC	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	1	2	8	1	17	10	15	22	2	1	15
POSITION	01-01	02-03	04-11	12-12	13-39	30-39	40-54	55-76	77-76	79-79	80-94

FIG. 8A

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FIELD	1	2	3	4	5	6	7	8	9
DATA ELEMENT NAME	RECORD TYPE CODE	TRANSACTION CODE	RECEIVING DFI IDENTIFICATION	CHECK DIGIT	DFI ACCOUNT NUMBER	TOTAL AMOUNT	IDENTIFICATION NUMBER	NUMBER OF ADDENDA RECORDS	RECEIVING COMPANY NAME/ID NUMBER
FIELD INCLUSION REQUIREMENT	M	M	M	M	R	M	O	R	R
CONTENTS	'6'	NUMERIC	TTTTAAAA	NUMERIC	ALPHANUMERIC	\$\$\$\$\$\$\$\$\$#	ALPHANUMERIC	NUMERIC	ALPHANUMERIC
LENGTH	1	2	8	1	17	10	15	4	16
POSITION	01-01	02-03	04-11	12-12	13-39	30-39	40-54	55-58	59-74

FIELD	10	11	12	13
DATA ELEMENT NAME	RESERVED	DISCRETIONARY DATA	ADDENDA RECORD INDICATOR	TRACE NUMBER
FIELD INCLUSION REQUIREMENT	N/A	O	M	M
CONTENTS	BLANK	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	2	2	1	15
POSITION	75-76	77-78	79-79	80-94

FIG. 8B

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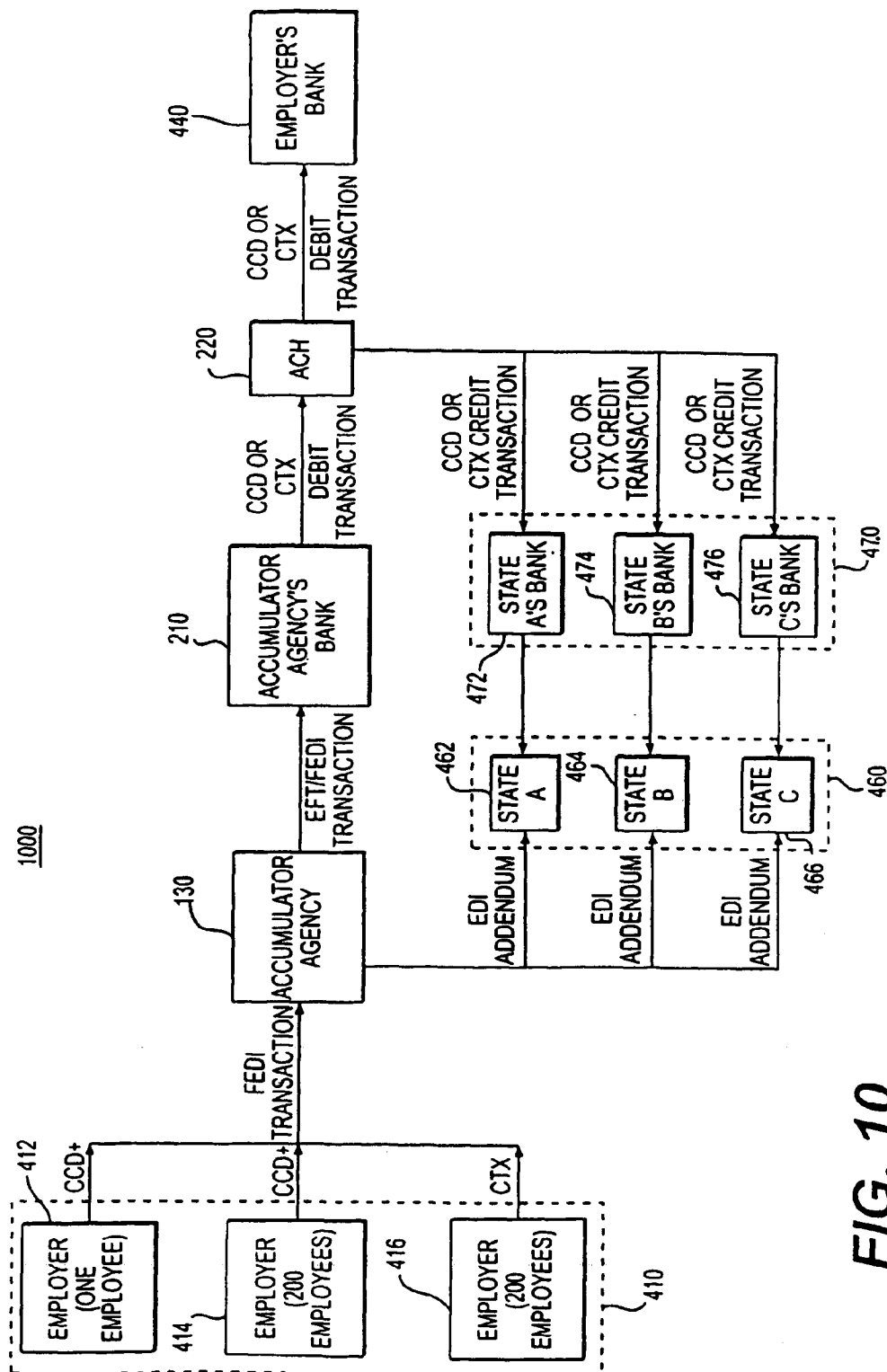
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FIG. 9A

FIELD	1	2	3	4	5
DATA ELEMENT NAME	RECORD TYPE RECORDING	ADDENDA TYPE CODE	PAYMENT RELATED INFORMATION	ADDENDA SEQUENCE NUMBER	ENTRY DETAIL SEQUENCE NUMBER
FIELD INCLUSION REQUIREMENT	M	M	O	M	M
CONTENTS	'7'	'0.5'	ALPHANUMERIC	NUMERIC	NUMERIC
LENGTH	1	2	80	4	7
POSITION	01-01	02-03	04-83	84-87	88-94

FIG. 9B

ELEMENT	COMMENTS	CONTENT	ATTRIBUTES		
			1	2	3
	SEGMENT IDENTIFIER	DED	M	ID	3/3
DED01	APPLICATION IDENTIFIER	CS	M	ID	2/2
DED02	CASE IDENTIFIER	XXXXXXXXXX	M	AN	1/20
DED03	PAY DATE	YYMMDD	M	DT	6/6
DED04	PAYMENT AMOUNT	\$\$\$\$\$\$\$\$\$CC	M	N2	1/10
DED05	NON-CUSTODIAL PARENT SOCIAL SECURITY NUMBER	XXXXXXXXXX	M	AN	9/9
DED06	MEDICAL SUPPORT INDICATOR	'Y'-YES, 'N'-NO	M	AN	1/1
DED07	NON-CUSTODIAL PARENT NAME	XXXXXXXXXX	O	AN	1/10
DED08	FIPS CODE	XXXXXX	O	AN	5/7
DED09	EMPLOYMENT TERMINATION INDICATOR	'Y'-YES	O	AN	1/1



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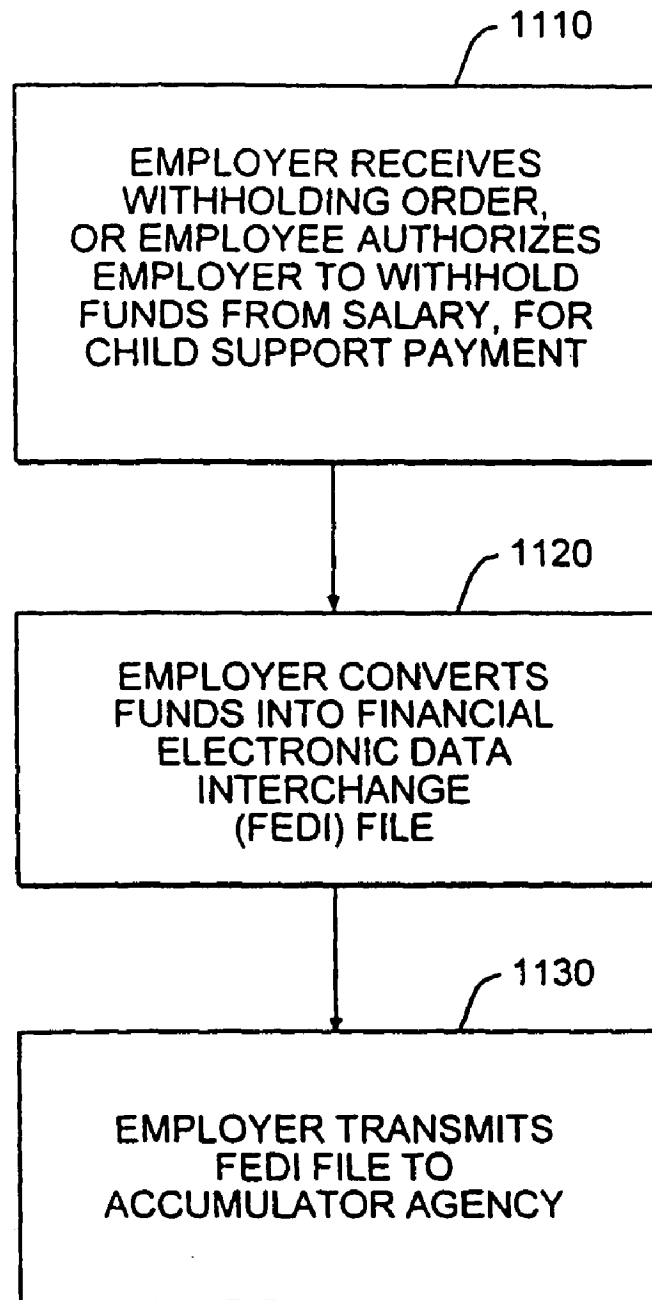
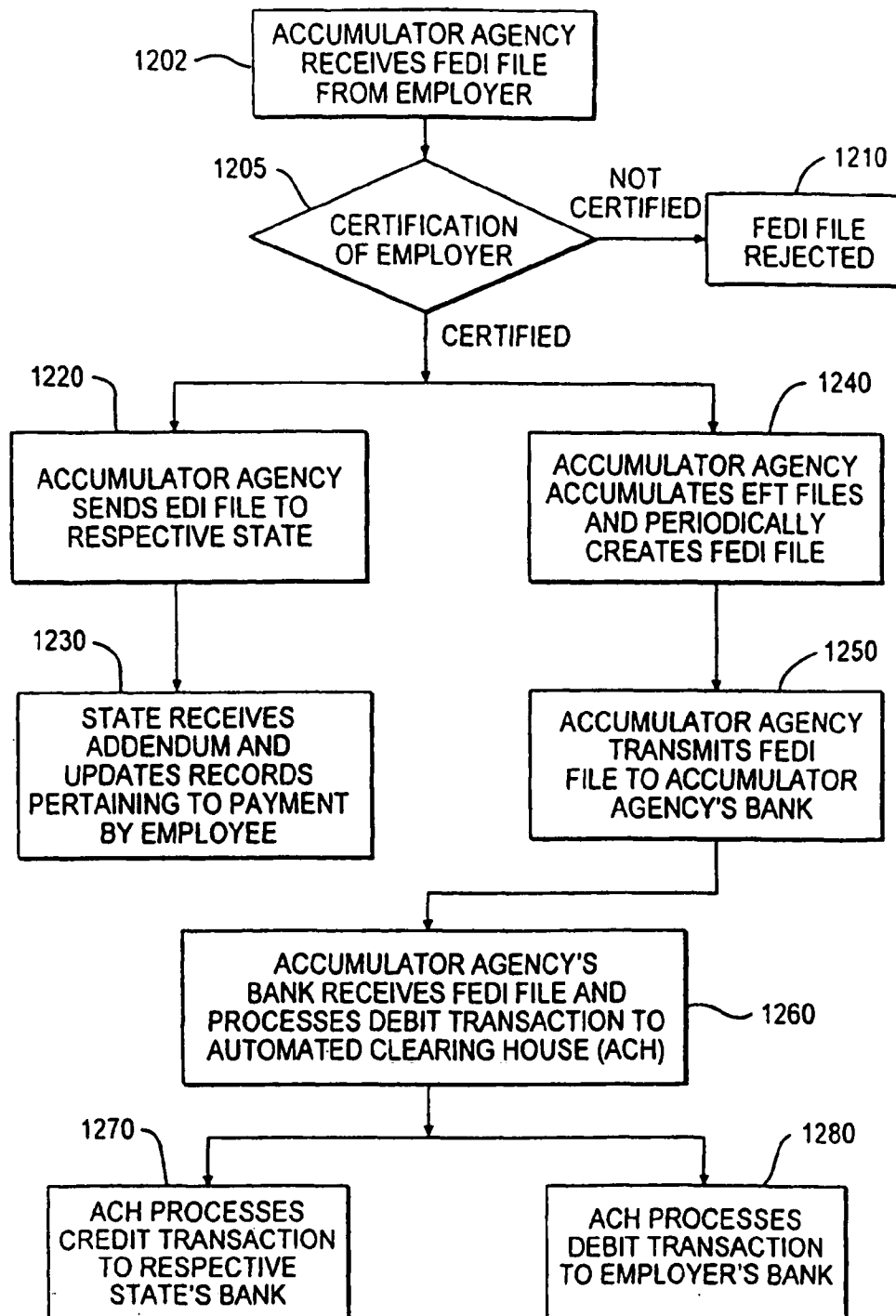


FIG. 11

**FIG. 12**

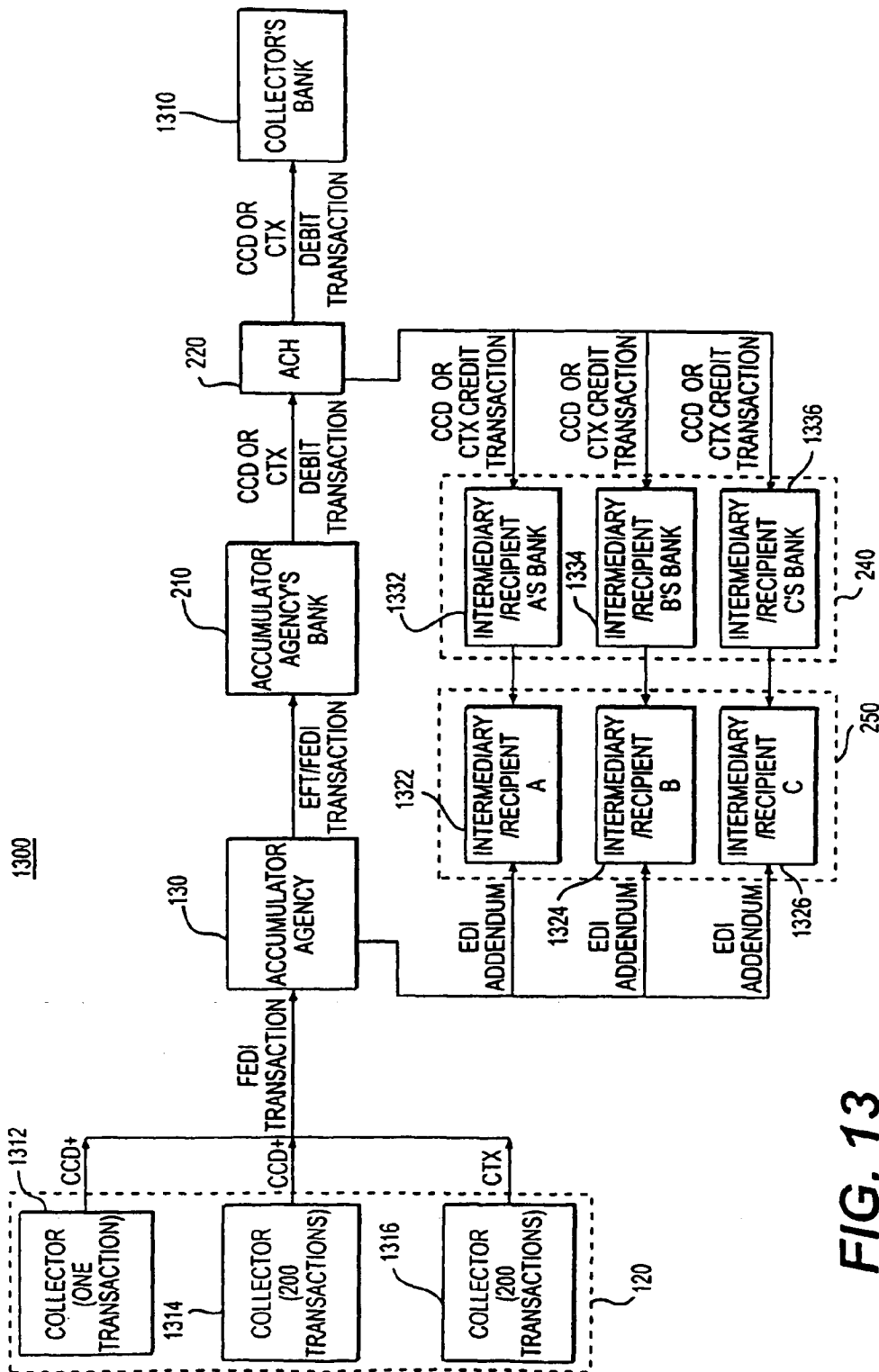


FIG. 13

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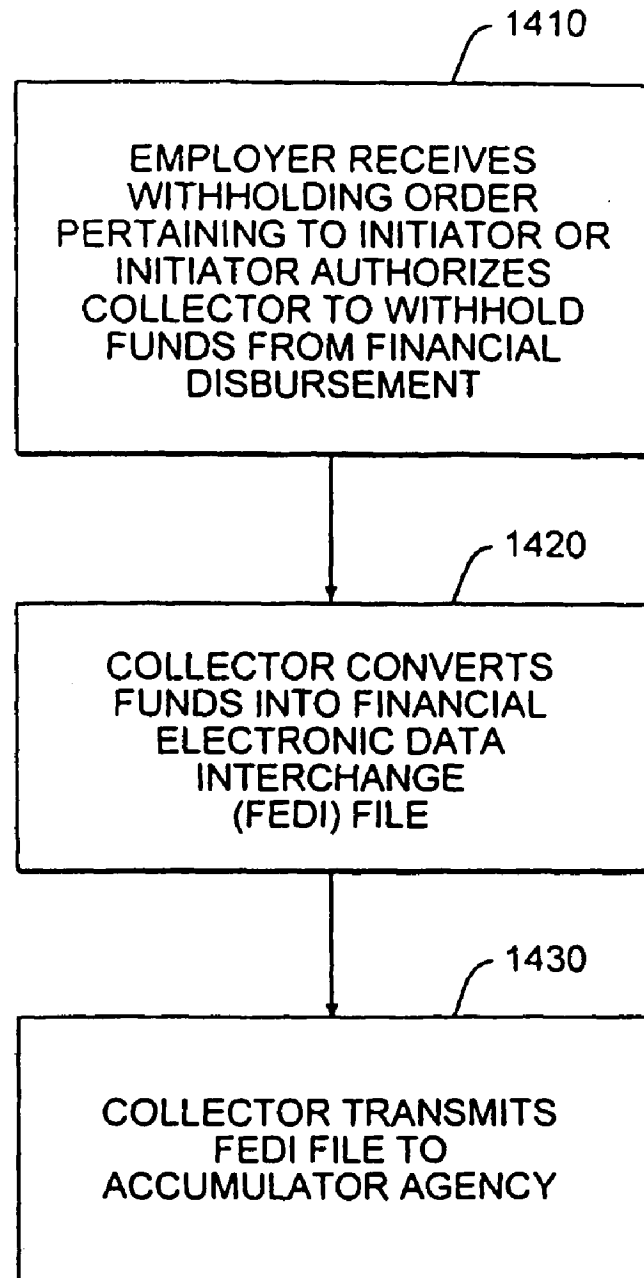
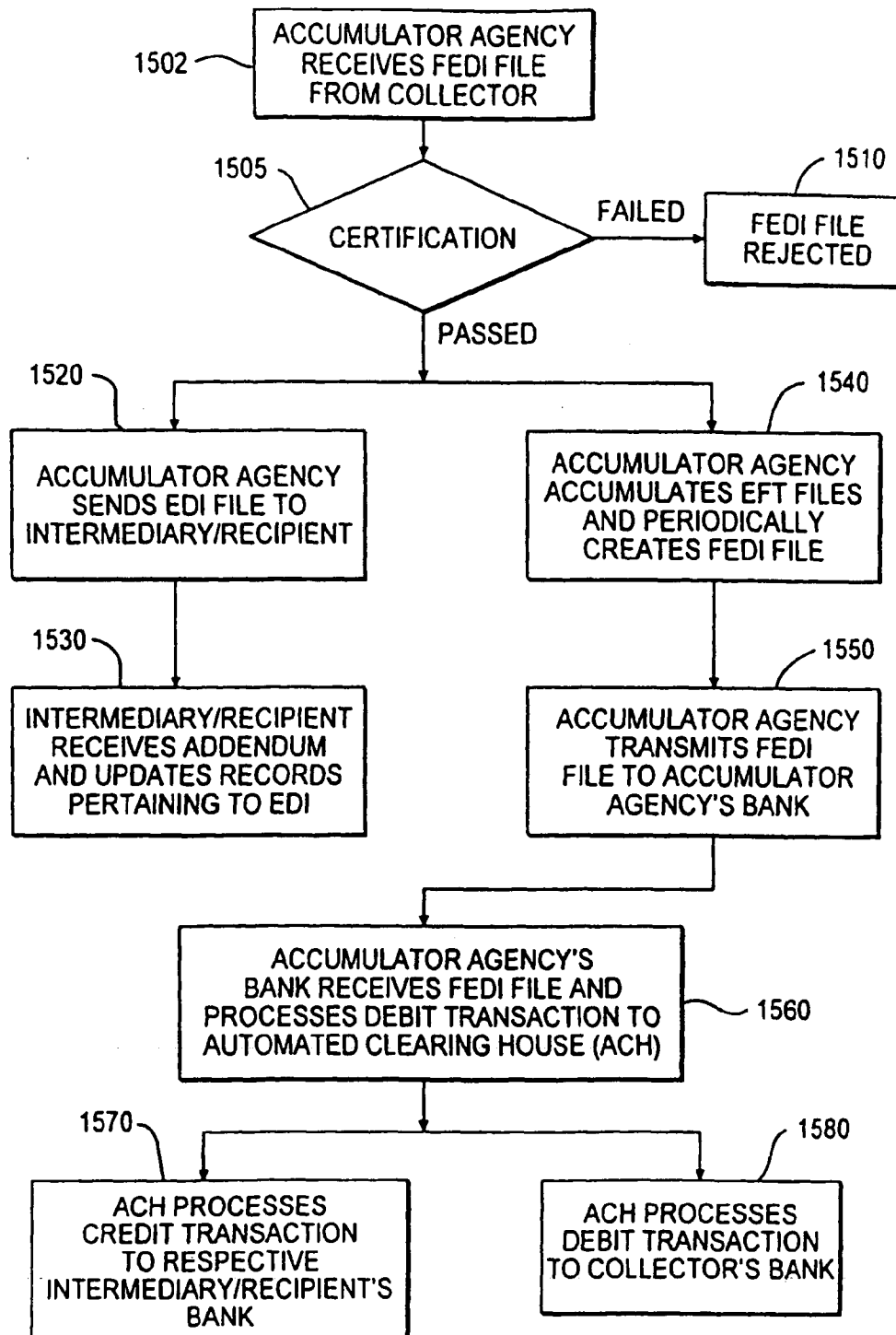


FIG. 14

**FIG. 15**

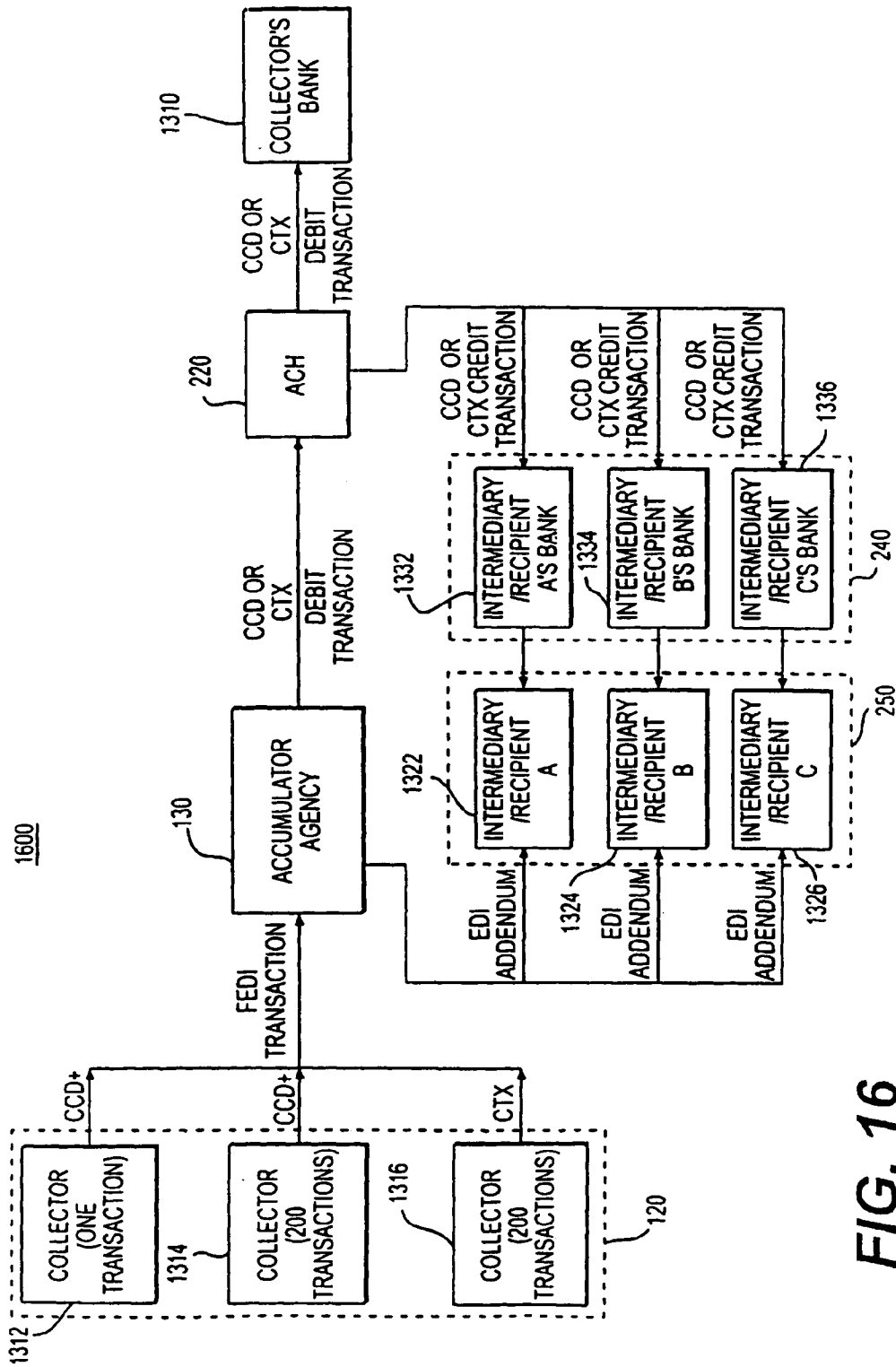


FIG. 16

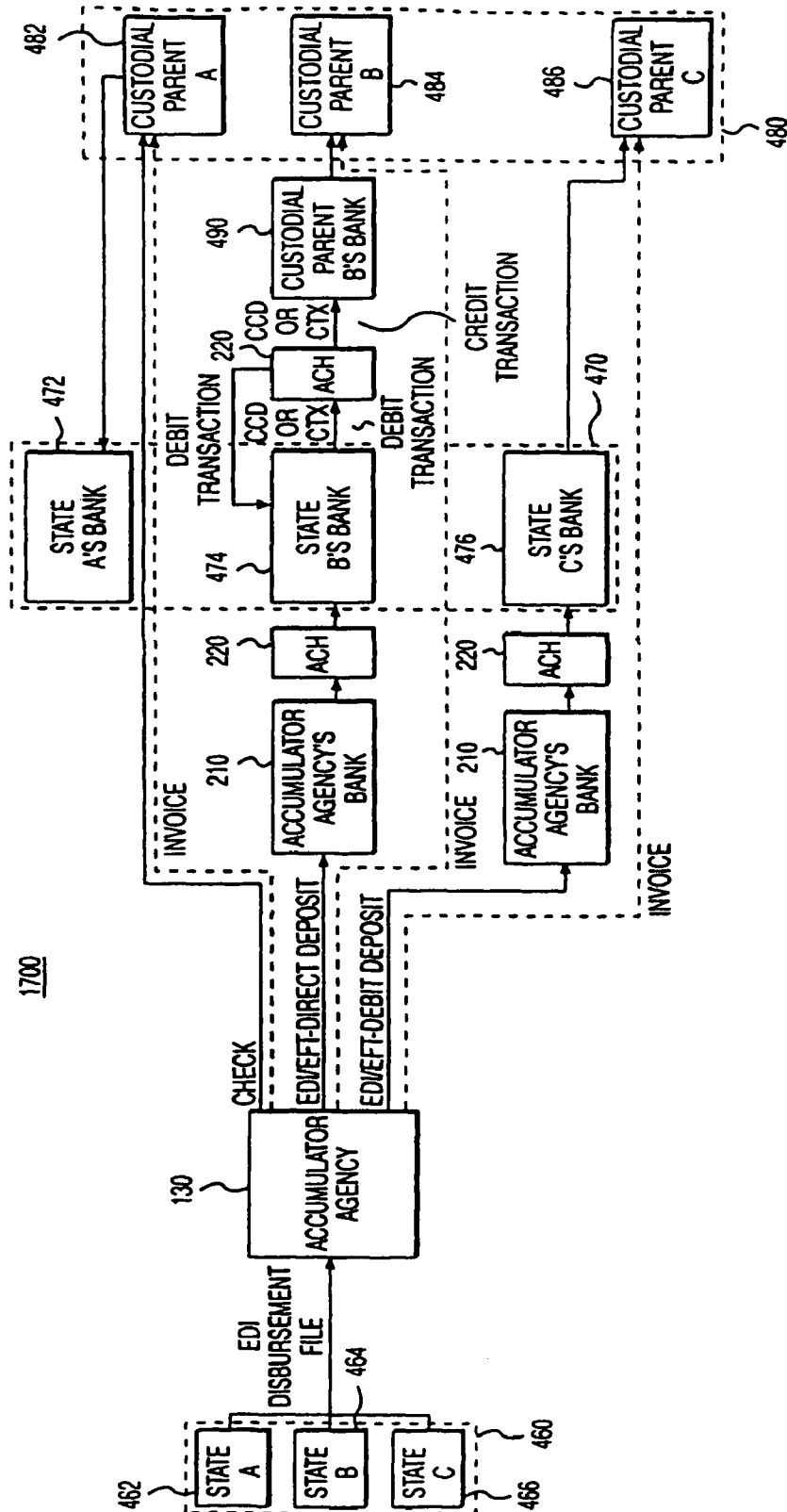


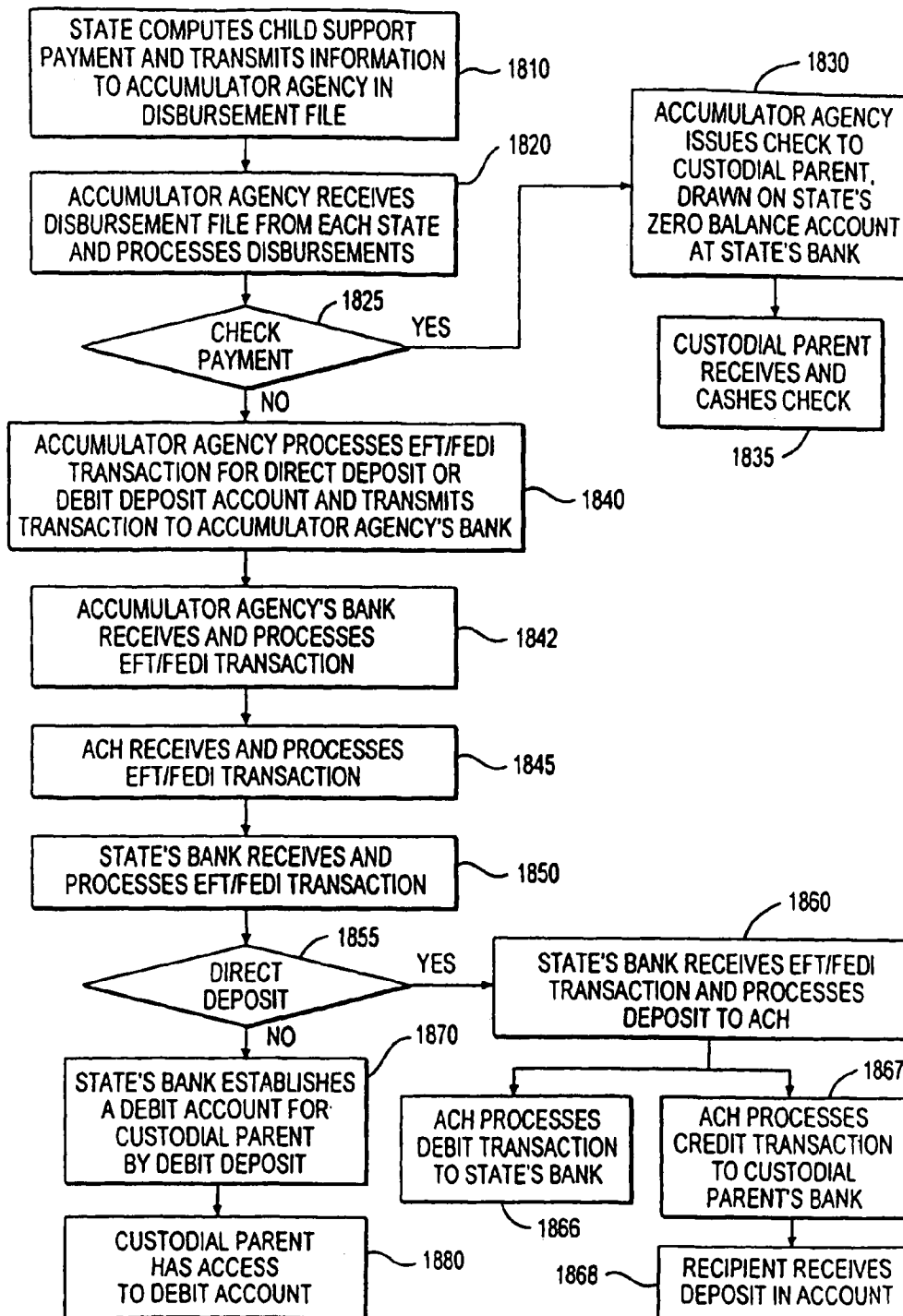
FIG. 17

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**FIG. 18**

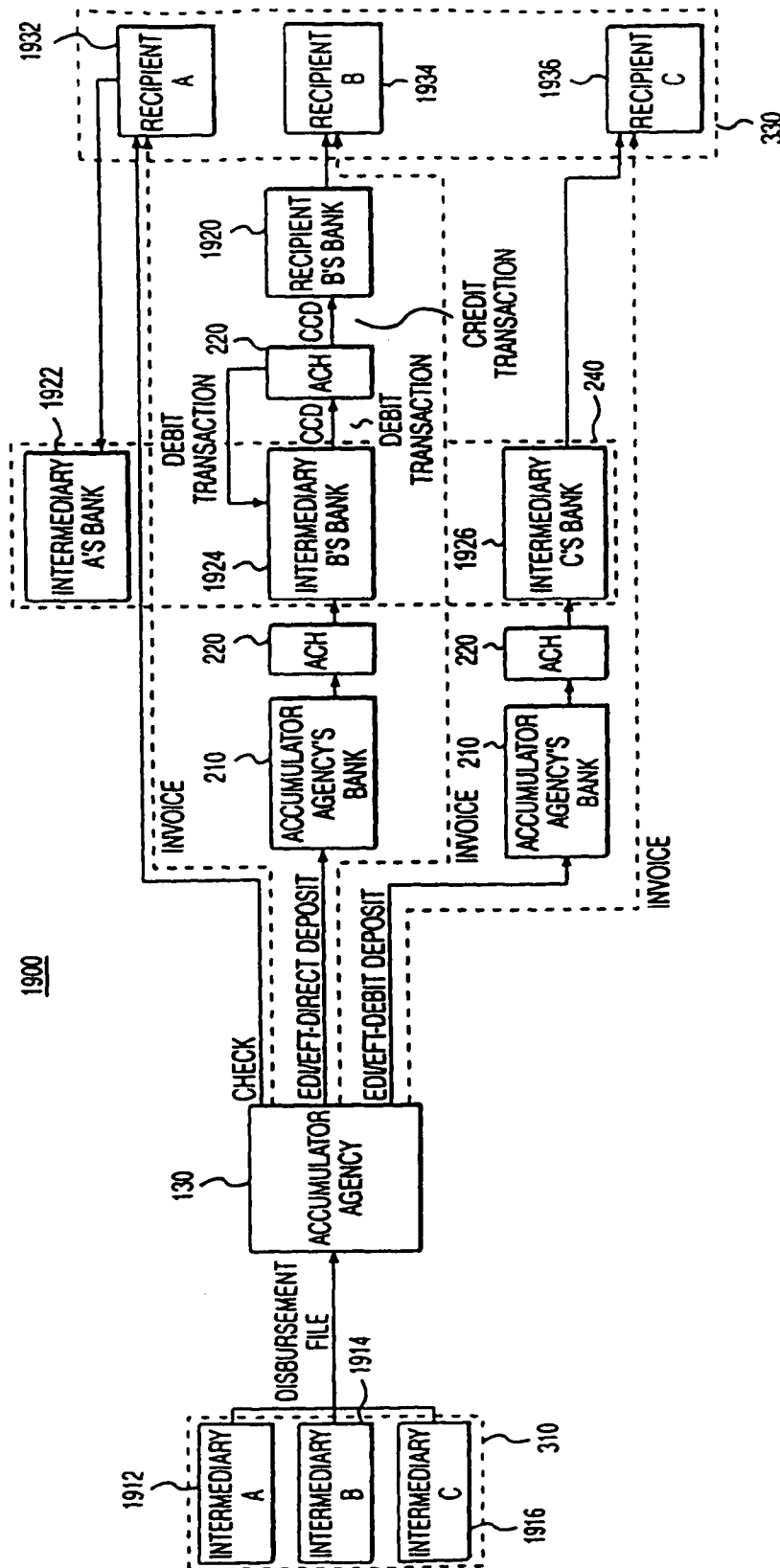
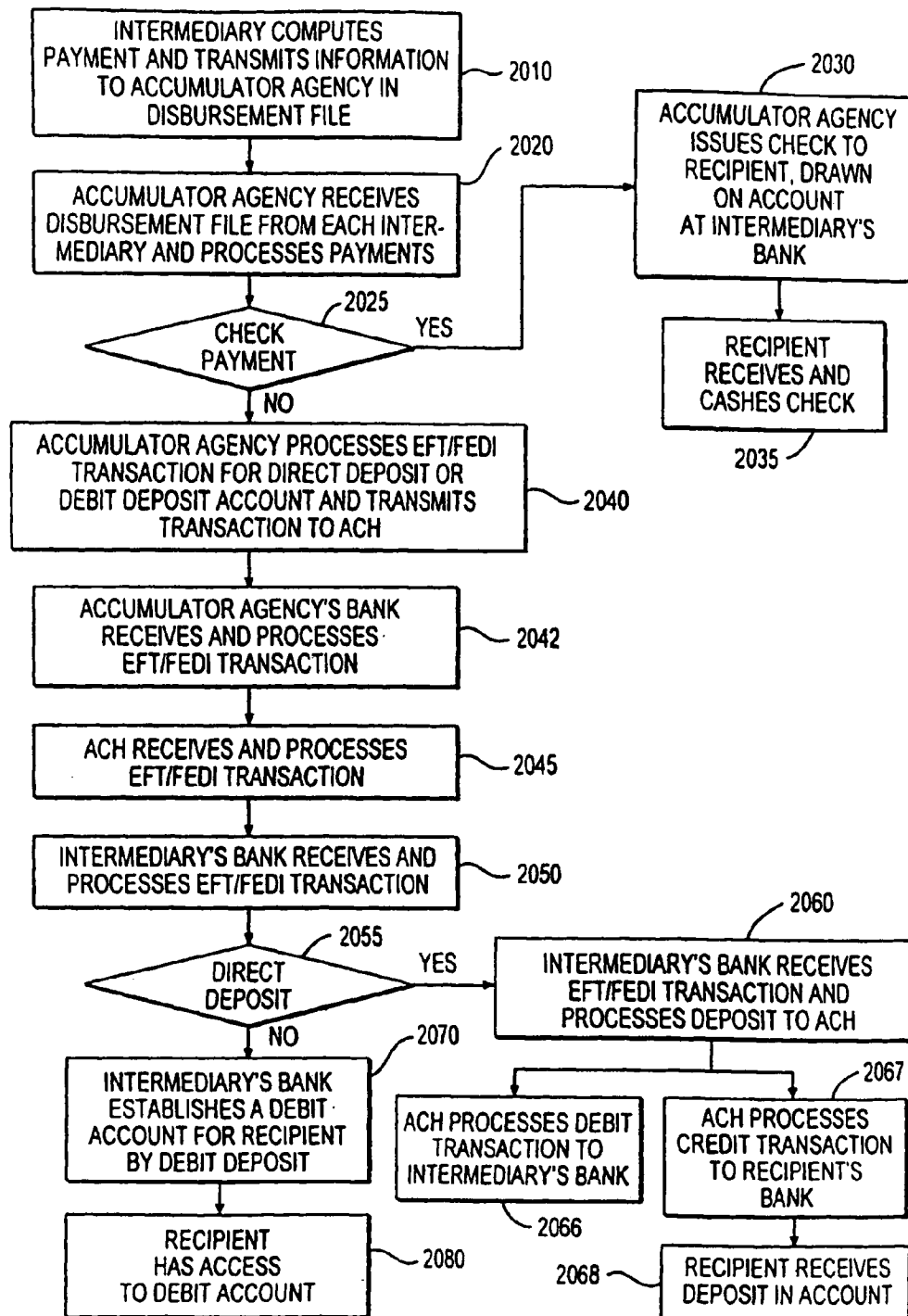


FIG. 19

**FIG. 20**

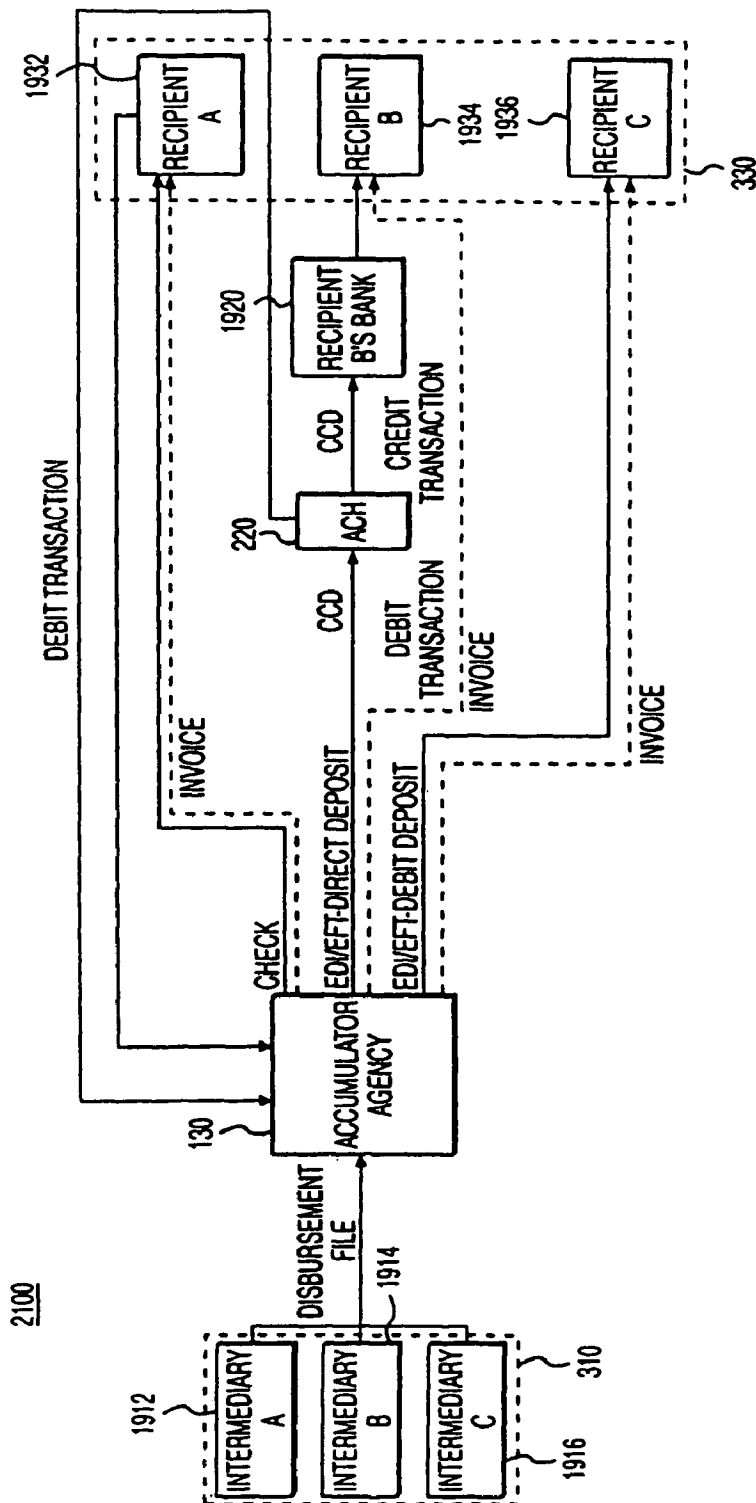


FIG. 21

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**METHOD AND APPARATUS FOR PAYMENT
PROCESSING USING DEBIT-BASED
ELECTRONIC FUNDS TRANSFER AND
DISBURSEMENT PROCESSING USING
ADDENDUM-BASED ELECTRONIC DATA
INTERCHANGE**

This is a continuation of application Ser. No. 09/003,941, filed Jan. 7, 1998, now U.S. Pat. No. 6,119,107, which is a divisional application of application Ser. No. 08/941,187, filed Sep. 30, 1997, now U.S. Pat. No. 5,946,669, all of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to the processing of payments and disbursements. More particularly, the invention relates to a method and apparatus for processing payments using debit-based electronic funds transfer and processing disbursements using addendum-based electronic data interchange.

2. Description of the Related Art

If an employee owes a permissive or mandatory obligation to a third party, the employee has few options for making recurring payments through the employer. Presently, most employers do not have the capability to process payments and disbursements for an employee through their payroll systems. If an employee has a recurring permissive obligation, the employee may make payments on this obligation through the traditional means, such as, for example, payment by cash, payment by a check, or electronic payment through the employee's bank. Similarly, if an employee has a recurring mandatory obligation, such as, for example, a child support payment, an alimony payment, or other similar court-enforced mandatory obligations, the employee may also make payments on these obligations through the same traditional methods. In either of these situations, however, there are few options for an employee to make payments or disbursements through an employer.

For recurring mandatory obligations, one option is for an employer to withhold an amount from an employee's wages and to make subsequent disbursement of the amount to a particular receiving entity. This withholding generally occurs as a court-sanctioned withholding, such as a garnishment. For example, there are presently systems that allow the payment and disbursement of child support obligations from an employer directly into the bank account of a state's child support agency. One present system comprises computer software that allows an employer to extract data from any corporate financial application in order to process the obligation. The software then connects with an automated clearinghouse and processes an electronic payment for the obligation. The electronic transaction is a credit-based transaction. In a credit-based transaction, the automated clearinghouse issues a credit to the state agency based on the amount of the obligation. The bank for the state agency receives the credit and subsequently issues a debit against the bank account of the employer. The automated clearinghouse receives the debit from the bank of the state agency and processes the debit against the bank of the employer. When the amount of the obligation is satisfied through the automated clearinghouse, the credit held by the bank of the state agency is satisfied by the debit issued against the bank of the employer. Another present system performs similar operations, but the system functions only on its own proprietary software. These current methodologies for payment

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and disbursement processing are inefficient and undesirable based at least on three grounds.

First, the current methods for payment and disbursement processing require that employers use credit-based transactions. These transactions involve numerous interactions with an automated clearinghouse, which involve both financial and temporal inefficiencies. A credit-based transaction is financially inefficient because this type of transaction requires more interactions with an automated clearinghouse. Each time that a transaction passes through an automated clearinghouse, a processing fee is charged. Also, a credit-based transaction is temporally inefficient. Because a credit-based transaction must pass through an automated clearinghouse in multiple incantations, this type of transaction takes more time to complete.

Second, the current methods for payment and disbursement processing only allow the processing of one financial transaction at a time. This inefficiency results because the current methods use a payment format that is limited to one financial exchange per payment or disbursement transaction. For all electronic transactions with an automated clearinghouse, there are four available formats: cash concentration or disbursement (CCD), cash concentration or disbursement plus addenda (CCD+), corporate trade exchange (CTX), and corporate trade payments (CTP). The current systems utilize the CCD+ format, a combination of the CCD format and an addendum. The CCD+ format is limited to a single addenda record and is thus limited to one payment and disbursement per transaction. An addenda record enables the exchange of electronic payments as well as payment-related information through financial institutions over an automated clearinghouse network. In contrast, the CTX format allows one electronic payment to cover multiple obligations, therefore including up to 9,999 addenda records. The CTP format utilizes a distinct combination of addenda records, but the CTP format was discontinued effective April 1996. Therefore, because the current systems only utilize the CCD+ format, they can only process transactions one at a time.

In addition to these financial and temporal inefficiencies, the current methods also contain inherent structural inefficiencies. The current methods for payment and disbursement processing all require a bank both at the beginning and at the end of each financial transaction. Accordingly, these systems do not allow the employer to initiate a financial transaction to a recipient directly through an automated clearinghouse. Instead, the systems require that an employer initiate the financial transaction at a bank, that the bank process the financial transaction through an automated clearinghouse, and that the automated clearinghouse complete the transaction between the employer and the recipient. For the current systems, these processes include multiple transactions through the automated clearinghouse. These structural inefficiencies inure due to the inability of the employer to initiate or process electronic transactions through an automated clearinghouse.

The inefficiencies and other shortcomings in the current methodologies for payment and disbursement processing reflect undesirable diminutions in capacity and quality that could be achieved by further development of improved payment and disbursement processing methods. Thus, the current payment and processing methods reflect an unsatisfactory development of methods and systems to process both the permissive and mandatory obligations of an employee by an employer and subsequent disbursement to an intended recipient.

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SUMMARY OF THE INVENTION

The present invention is directed to a method and system that obviates problems due to the limitations and disadvantages of the prior art.

It is an object of one embodiment of the invention to provide a system whereby a collector of funds may easily process a payment and a disbursement.

It is another object of another embodiment of the invention to enable a collector to transmit an electronic payment and an addendum-based file to an accumulator agency for processing.

It is still another object of another embodiment of the invention to enable an accumulator agency to receive an electronic payment and to process a payment as a debit-based transaction.

It is yet another object of another embodiment of the invention to enable an accumulator agency to receive an addendum-based file and to process a disbursement based on the addendum information.

To achieve these and other objects, and in accordance with the purposes of the invention, as embodied and broadly described, one aspect of the invention includes a method of accumulating a payment and processing a disbursement. This method comprises initiating a payment with disbursement information from a payor to a payee through a collector; transferring to an accumulator agency the payment and the disbursement information from the collector; processing from the agency the payment as a debit transaction; and processing from the agency the disbursement information as an addendum transaction.

A further aspect of the invention includes a method of processing a payment. This method comprises receiving payment information at a collector; sending the payment information from the collector to an accumulator agency; receiving at the accumulator agency payment information from the collector regarding the payment; and initiating by the accumulator agency the payment as a debit transaction.

Another aspect of the invention includes a method of processing a disbursement. This method comprises transmitting by an accumulator agency disbursement information to an intermediary; receiving at the accumulator agency disbursement transaction information from the intermediary regarding authorization for a disbursement as an addendum transaction; and executing the disbursement to a recipient.

Additional aspects of the invention are disclosed and defined by the appended claims. It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings are included to provide a further understanding of the invention, are incorporated in and constitute a part of this specification, illustrate preferred embodiments of the invention, and, together with the description, serve to explain the principles of the invention.

In the drawings,

FIG. 1 is a block diagram of a payment and disbursement processing system;

FIG. 2 is a block diagram of a debit-based payment processing system in accordance with one embodiment of the present invention, as shown in FIG. 1;

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FIG. 3 is a block diagram of an addendum-based disbursement processing system in accordance with one embodiment of the present invention, as shown in FIG. 1;

FIG. 4 is a block diagram of a payment and disbursement processing system, in accordance with a preferred embodiment of the present invention, as shown in FIG. 1;

FIG. 5 is a block diagram of a collector, as shown in FIG. 1;

FIG. 6 is a block diagram of an accumulator agency, as shown in FIG. 1;

FIG. 7 is a block diagram of an intermediary/recipient, as shown in FIG. 2;

FIGS. 8A and 8B are samples of the contents of the financial electronic data interchange database and the electronic funds transfer database stored in the collector terminal shown in FIG. 5, the accumulator agency server shown in FIG. 6, and the intermediary/recipient terminal shown in FIG. 7;

FIGS. 9A and 9B are samples of the contents of the electronic data interchange addenda database stored in the collector terminal shown in FIG. 5, the accumulator agency server shown in FIG. 6, and the intermediary/recipient terminal shown in FIG. 7;

FIG. 10 is a block diagram of a payment processing system, in accordance with the preferred embodiment of the present invention, as shown in FIG. 4;

FIG. 11 is a flow diagram of a method for initiating a payment, in accordance with the embodiment of the invention, as shown in FIG. 10;

FIG. 12 is a flow diagram of a method for implementing payment processing, in accordance with the embodiment of the invention, as shown in FIG. 10;

FIG. 13 is a block diagram of a payment processing system, in accordance with an alternative embodiment of the present invention, as shown in FIG. 2;

FIG. 14 is a flow diagram for a method for initiating a payment, in accordance with the embodiment of the invention, as shown in FIG. 13;

FIG. 15 is a flow diagram for a method for implementing payment processing, in accordance with the embodiment of the invention, as shown in FIG. 13;

FIG. 16 is a block diagram for a payment processing system, in accordance with another alternative embodiment of the present invention, as shown in FIG. 2;

FIG. 17 is a block diagram for a disbursement processing system, in accordance with the preferred embodiment of the present invention, as shown in FIG. 4;

FIG. 18 is a flow diagram of a method for disbursement processing, in accordance with the embodiment of the invention shown in FIG. 17;

FIG. 19 is a block diagram of a disbursement processing system, in accordance with an alternative embodiment of the present invention, as shown in FIG. 3;

FIG. 20 is a flow diagram for a method of disbursement processing, in accordance with the embodiment of the invention shown in FIG. 19; and

FIG. 21 is a block diagram of a disbursement system, in accordance with another alternative embodiment of the present invention, as shown in FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Introduction

The system of a preferred embodiment of the invention avoids the inefficiencies and shortcomings of the prior art

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payment and disbursement methodologies by integrating the collection of payment and disbursement information by an employer and transmitting the information to an accumulator agency. The accumulator agency then processes the payment as a debit-based transaction and processes the disbursement as an addendum-based transaction. In this system, all parties benefit: the payor benefits by the availability of a simple method for payment and disbursement processing through an employer, the employer benefits by a fast and inexpensive method for transmitting payments and disbursements from an employee to a recipient, and the recipient benefits from the timely transmittal and receipt of a payment. The system is also beneficial to disbursement processors because the system allows for efficient transmittal of disbursement information without payment overhead.

A preferred system consistent with the invention comprises several components, including a collector, an accumulator agency, and an intermediary/recipient. From an initiator, the collector receives payment and disbursement information, which is initially stored at the collector. The collector maintains a database of payment and disbursement information pursuant to each initiator. The accumulator agency serves as a processing station between the collector and the recipient/intermediary. The accumulator agency receives the payment and disbursement information from the collector, verifies the validity of the information, and if valid, further processes the payment and disbursement. For payment processing, the accumulator agency transmits payments as debit-based transactions. For disbursement processing, the accumulator agency transmits disbursements as addendum-based transactions.

System

FIG. 1 shows a payment and disbursement system according to one embodiment of the present invention. System 100 includes initiator 110, collector 120, accumulator agency 130, debit-based payment processing 140, and addendum-based disbursement processing 150. Initiator 110, which is preferably an employee seeking to initiate a permissive payment and disbursement or an employee subject to a mandatory payment and disbursement, transacts with collector 120, which is preferably an employer. Collector 120 receives the payment and disbursement information from initiator 110, and collector 120 records the information in a database and transmits the information to accumulator agency 130. Accumulator agency 130 verifies and processes the payment and disbursement information. For payment processing, accumulator agency 130 transmits the payment according to debit-based payment processing 140. Debit-based payment processing 140 incorporates financial processing information. For disbursement processing, accumulator agency 130 transmits disbursement information according to addendum-based disbursement processing 150. Addendum-based disbursement processing 150 incorporates the non-financial information contained within the addendum.

FIG. 2 illustrates an embodiment of a debit-based payment processing system consistent with system 100 shown in FIG. 1. As shown in FIG. 2, debit-based payment processing system 200 includes collector 120, accumulator agency 130, accumulator agency's bank 210, automated clearing house (ACH) 220, collector's bank 230, intermediary/recipient's bank 240, and intermediary/recipient 250. As described in FIG. 1, collector 120 receives the payment and disbursement information, records the information in a database, and then transmits the information to accumulator agency 130. The transmission of this information occurs in

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the form of an addendum-based financial electronic data interchange (FEDI) file. Electronic data interchange (EDI) describes the computer to computer exchange of information from one entity to another using electronic communication, and electronic funds transfer (EFT) describes the exchange of an electronic payment using electronic communication. FEDI is a combination of an EDI disbursement information with an EFT electronic payment. Accumulator agency 130 receives the FEDI file, verifies the validity of the information in the file, and then records the information in a database. Following the validation of the FEDI file, accumulator agency 130 segregates the payment information and the disbursement information from the FEDI file. Accumulator agency 130 then sends the payment information to debit-based payment processing 140 and the disbursement information to addendum-based disbursement processing 150.

For the processing of the payment according to FIG. 2, accumulator agency 130 transmits an EDI addendum to intermediary/recipient 250, with data indicating that a payment has been made. Also, accumulator agency 130 transmits an EFT transaction to accumulator agency's bank 210. Notably, accumulator agency 130 may transmit any number of EFT transactions to accumulator agency's bank 210 for processing. For example, if a payment is due to an intermediary/recipient from 500 entities, accumulator agency 130 may transmit all 500 payments as one EFT transaction to accumulator agency's bank 210 for processing. In so doing, accumulator agency 130 not only utilizes an efficient means of transmitting an EFT transaction but also saves transaction costs by using a single EFT transaction. For example, accumulator agency 130 could transmit this single EFT transaction containing 500 payments using the CTX format, which provides for up to 9,999 payments.

Once accumulator agency's bank 210 receives the EFT transaction from accumulator agency 130, accumulator agency's bank 210 must process each of the individual debit-based transactions contained within the EFT transaction. Like accumulator agency 130, accumulator agency's bank 210 may also use various EFT formats for processing multiple payments through ACH 220. ACH 240 is a clearing house for processing financial transactions through the Federal Reserve system, such as, for example, the National Automated Clearinghouse Association (NACHA).

Following transmission of the payment information to ACH 220, ACH 220 then processes the debit-based transactions initiated by accumulator agency's bank 210. Because these transactions are debit-based transactions, ACH 220 performs merely two transactions. First, ACH 220 issues a debit against the payor of the payment, and second, ACH 220 issues a credit to the recipient of the transaction. Thus, for the debit-based transactions initiated by accumulator agency's bank 210, ACH 220 initiates a debit transaction to collector's bank 230 and a credit transaction to intermediary/recipient's bank 240. Again, like collector 120 and accumulator agency 130, ACH 220 may utilize various EFT formats for multiple transmissions of these electronic transactions. Once ACH 240 has completed these transactions, payment processing has occurred, as intermediary/recipient 250 has received payment in intermediary/recipient's bank 240 from collector 120.

FIG. 3 illustrates an embodiment of an addendum-based disbursement processing system consistent with system 100 shown in FIG. 1. As shown in FIG. 3, addendum-based disbursement processing system 300 includes intermediary 310, accumulator agency 130, disbursement 320, paper check 322, direct deposit 324, debit deposit 326, and recipi-

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ent 330. As described in FIG. 1, collector 120 receives payment and disbursement information from initiator 110, records the information in a database, and then transmits the information to accumulator agency 130. The transmission of payment and disbursement information occurs via a FEDI file. Once accumulator agency 130 receives the FEDI file, and following verification, accumulator agency 130 records the information in a database and segregates the payment and the disbursement from the FEDI file. Accumulator agency 130 then processes the disbursement information according to addendum-based disbursement processing 150.

For the processing of the disbursement according to FIG. 3, intermediary 310 initially receives an EDI file from accumulator agency 130, as shown in FIG. 2. This EDI file contains information relating to the payment made by initiator 110 and requests instructions regarding the disbursement. Intermediary 310 then processes the information and determines whether a disbursement is to be made. If a disbursement is approved by intermediary 310, intermediary 310 transmits another EDI file to accumulator agency 130 with instructions for the disbursement. Accumulator agency 130 then processes disbursement 320. Disbursement 320 may include any of a number of several disbursement methods, including paper check 322, direct deposit 324, and debit deposit 326. Accumulator agency 130 processes paper check 322 by the traditional methodology, by printing and mailing the check to recipient 330. Accumulator agency 130 processes direct deposit 324 also through the traditional methods, by issuing the deposit by EFT. Accumulator agency 130 processes debit deposit 326 through any number of available options by issuing an EFT, including the creation of a debit deposit at a bank operated by a state agency or the creation of a debit deposit account at a bank operated by accumulator agency 130. Whatever the methodology for disbursement, according to system 300, disbursement 320 processes a disbursement to recipient 330 according to instructions provided to accumulator agency 130 from intermediary 310.

FIG. 4 illustrates a preferred embodiment for a payment and disbursement system according to the present invention. System 400 depicts a payment and disbursement system for transmitting child support obligations from a non-custodial to a custodial parent through an employer. Of course, one skilled in the art will realize many alternative applications for this system.

As shown in FIG. 4, system 400 anticipates that initiator 110 (in the case of the preferred embodiment, an employee) has already initiated a payment and disbursement. System 400 thus shows three alternatives for collector 120 (shown here as employer 410) for initiating a payment and disbursement consistent with the invention. Employer 410 depicts alternative ways that an employer can initiate a payment and disbursement for an employee, illustrated as employer 412, employer 414, and employer 416. Employer 412 has only one employee subject to child support obligations, employer 412 has 200 employees subject to child support obligations, and employer 416 also has 200 employees subject to child support obligations. In the case of employer 412, the FEDI file transmitted from employer 412 to accumulator agency 130 comprises the CCD+ format. As noted above, the CCD+ format provides for an EFT transaction plus an addendum, but the CCD+ format is limited to one addendum per transaction. Thus, employer 414 also utilizes the CCD+ format, but due to the limitations of this EFT format, employer 414 would be required to use 200 separate FEDI transactions in the CCD+ format. In contrast, employer 416 transmits all 200 transactions utilizing the CTX format. As

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noted above, the CTX format allows for the transmission of a payment with up to 9,999 addenda records. Employer 416 therefore saves both time and expense by using the CTX format. Whatever the format, once employer 410 transmits the necessary FEDI files, accumulator agency 130 receives the FEDI files from employer 410 and processes the payment and disbursement transactions.

For payment processing according to system 400, accumulator agency 130 transmits an EDI transaction to state 460 and an EFT transaction to accumulator agency's bank 210. The EDI transaction from accumulator agency 130 to state 460 indicates that a payment has been made. The EFT (or FEDI) transaction from accumulator agency 130 to accumulator agency's bank 210 contains the payment information to initiate a payment from initiator 110 (that is, a non-custodial parent) to recipient 330 (that is, custodial parent 480). As depicted in system 400, state 460 comprises state A 462, state B 464 and state C 466. System 400 contains three representations of state 460 for purposes of describing three alternatives for payment and disbursement processing. For similar reasons, system 400 contains three representations of state bank 470, including state A's bank 472, state B's bank 474, and state C's bank 476, and accordingly, system 400 contains three representations of custodial parent 480, including custodial parent A 482, custodial parent B 484, and custodial parent C 486.

Continuing with payment processing according to system 400, accumulator agency's bank 210 % receives the payment information from accumulator agency 130 and processes the payment via ACH 220 as a debit-based transaction. In processing the debit-based transaction, ACH 220 issues a debit against employer's bank 440 and issues a credit to state bank 470. In this manner, the payment is completed from initiator 110, or the non-custodial parent, to state 460 via employer 410 for the benefit of recipient 330, or custodial parent 480. The particular steps associated with the processes of payment processing are described in connection of FIGS. 10-16.

For disbursement processing according to system 400, state 460 issues an EDI transaction to accumulator agency 130, authorizing a disbursement to custodial parent 480. Accumulator agency 130 then processes the disbursement 320 according to one of three methods, paper check 322, direct deposit 324, or debit deposit 326. As shown in FIG. 4, for a disbursement by paper check, state A 462 transmits an EDI file to accumulator agency 130, authorizing a disbursement to custodial parent A 482. Accumulator agency 130 then prints and issues a check directly to custodial parent A 482. For a disbursement by direct deposit, state B 464 issues an EDI file to accumulator agency 130, authorizing a disbursement to custodial parent B 484. Accumulator agency 130 then issues an EFT transaction to accumulator agency's bank 210, authorizing a direct deposit to custodial parent B 484. Accumulator agency's bank 210 issues an EFT transaction to ACH 220, initiating a direct deposit to custodial parent B 484. Based on this instruction for a direct deposit, ACH 220 issues a debit transaction against state B's bank 474 and issues a credit transaction to custodial parent B's bank 490, for the benefit of custodial parent B 484. For a disbursement by debit deposit, state C transmits an EDI to accumulator agency 130, authorizing a debit deposit to custodial parent C 486. Accumulator agency 130 transmits an EFT transaction to accumulator agency's bank 210, authorizing the creation of a debit deposit account to the benefit of custodial parent C 486. Accumulator agency's bank 210 issues an EFT transaction to ACH 220, providing for the creation of a debit deposit in state C's bank

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476. Once a debit deposit is created in state C's bank 476, custodial parent C 486 may access the account and receive the disbursement. The particular steps associated with the processes of disbursement processing are described in connection with FIGS. 17–21.

In the payment and disbursement system described in FIG. 4, it should be noted that all the designations are exemplary. One skilled in the art would be able to recognize various implementations of system 400. For example, the reference to a state does not limit the scope of this invention to a state of the United States, but in the context of the preferred embodiment, the reference may apply to any local, regional, federal, or international governmental entity. In other embodiments, moreover, the reference to a state could even apply to a nongovernmental entity, such as, for example, a mutual fund, a bill payment center, or any other commercial entity. Indeed, all the designations in system 400 entail such broad applications in the context of payment and disbursement processing.

FIG. 5 illustrates one embodiment of collector 120 used in system 100 shown in FIG. 1. As shown in FIG. 5, collector 120 preferably includes collector terminal 500 equipped with conventional hardware, including central processing unit (CPU) 510, random access memory (RAM) 512, display memory 514, video interface circuit (VIC) 516, input/output controller (I/O) 518, data storage device (disk) 520, input device 530, display 540, external device 550, and optional network interface 560. Collector terminal 500 basically functions as a conventional data processor.

As shown in FIG. 5, CPU 510 is directly coupled to each of the other elements of collector terminal 500. CPU 510 executes program code (not shown) stored in one or more RAM 512 or disk 520 to carry out the functions and acts described in connection with collector terminal 500. CPU 510 preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as accumulation of a payment and disbursement, transmission of a payment and disbursement, and the processing and completion of a payment and disbursement. The processes performed by these modules are described in connection with FIGS. 10–21. CPU 510 interacts with RAM 512 and disk 520 to execute stored program code according to conventional data processing techniques.

As also shown in FIG. 5, input device 530 permits collector terminal 500 to receive payment and disbursement information about initiator 110 and, although shown as a single device, may comprise one or more data input devices of various types, such as an alphanumeric keyboard, a numeric keypad, a bar code scanner, a credit card reader, a disk drive, a memory, an electronic communication line, and a wireless transceiver. Input device 530 preferably transmits received information to CPU 510 for storage in disk 520. VIC 516 comprises a video driver sending signals to display 540 displaying either text or graphics based on the contents of display memory 514. Display 540 is preferably large enough to display information relating to payment and disbursement processing for initiators 110. External device 550 allows operability of other components with collector 120, such as, for example, a modem, a printer, a scanner, a photocopying device, or any other form of input or output device. Optional network interface 560 links CPU 510 to allow communication with other collector devices, such as multiple collector terminals 500.

As shown in FIG. 5, disk 520 preferably comprises a large capacity memory capable of maintaining FEDI file database 522 and EDI addenda database 524. FEDI file database 522 contains data pertaining to payment and disbursement infor-

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mation accumulated from initiators 110. The contents of FEDI file database 522 are transmitted to accumulator agency 130 for processing. EDI addenda database 524 contains the disbursement information from FEDI file database 522. Data contained in one or more of these databases 522 and 524 may be periodically updated from collectors 120 via input device 530, external device 550, or optional network interface 560. Samples of the records and their respective fields contained in databases 522 and 524 are shown in and described in connection with FIGS. 8A–8B and 9A–9B.

FIG. 6 illustrates one embodiment of accumulator agency 130 used in system 100 shown in FIG. 1. Accumulator agency 130 preferably comprises accumulator agency server 600 equipped with conventional hardware, including CPU 610, RAM 612, display memory 614, VIC 616, I/O 618, disk 620, input device 630, display 640, external device 650, and optional network interface 660. In general, elements of accumulator agency server 600 common to collector terminal 500 preferably operate in substantially the same manner as described above. Because accumulator agency server 600 may service one or more external devices 650, accumulator agency server 600 is preferably capable of interfacing with one or more collector terminals 500. Alternatively, accumulator agency server 600 130 may also interface with one or more collector terminals 500 via optional network interface 660.

As shown in FIG. 6, disk 620 preferably comprises a large capacity memory capable of maintaining FEDI file database 622, EFT debit database 624, and EDI addenda database 626. FEDI file database 622 contains data pertaining to the payment and disbursement information transmitted by collector terminals 500. Indeed, FEDI file database 622 contains data corresponding to FEDI file database 522. EFT debit database 624 contains the payment information from FEDI file database 622. EDI addenda database 626 contains the disbursement information from FEDI file database 622. Data contained in one or more of these databases 622, 624, and 626 may be periodically obtained and updated from collector terminals 500 via external device 650 or optional network interface 660. Samples of the records and their respective fields contained in databases 622, 624, and 626 are shown in and described in connection with FIGS. 5A–5B and 9A and 9B.

FIG. 7 illustrates one embodiment of intermediary/recipient 250 used in system 200 shown in FIG. 2. Intermediary/recipient 250 preferably comprises intermediary/recipient terminal 700 equipped with conventional hardware, including CPU 710, RAM 712, display memory 714, VIC 716, I/O 718, disk 720, input device 730, display 740, external device 750, and optional network interface 760. Again, elements of intermediary/recipient terminal 700 common to collector terminal 500 or accumulator agency server 600 preferably operate in substantially the same manner as described above. External device 750 or optional network interface 760 allows connectivity of intermediary/recipient terminal 700 to external computers or networks. In a preferred embodiment, one such external computer is accumulator agency server 600.

As shown in FIG. 7, disk 720 maintains EDI addenda database 721, EFT credit database 723, disbursement database 725, initiator database 727, and recipient database 729. EDI addenda database 721 contains the addendum information transmitted by accumulator agency server 600. Indeed, EDI addenda database 721 contains data corresponding to EDI addenda database 626. EFT credit database 723 contains the credit transactions transmitted from ACH 220.

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Disbursement database **725** contains information designating whether a disbursement will be authorized and transmitted to accumulator agency server **600**. Initiator database **727** contains a listing of authorized initiators for payment transactions. Recipient database **729** contains a listing of the authorized recipients for the receipt of disbursements. Samples of the records and their respective fields contained in databases **721**, **723**, **725**, **727**, and **729** are shown in and described in connection with FIGS. **8A-8B** and **9A-9B**.

Database Formats

Samples of the contents of FEDI file database **522**, EDI addenda database **524**, FEDI file database **622**, EFT debit database **624**, EDI addenda database **626**, EDI addenda database **721**, EFT credit database **723**, disbursement database **725**, initiator database **727**, and recipient database **729** are shown in FIGS. **5A-5B** and **9A-9B**. The specific data and fields illustrated in these figures represent only one embodiment of the records stored in the databases consistent with the invention. In most cases, the fields shown in FIGS. **5A-5B** and **9A-9B** are relatively straight forward and self-explanatory. In addition to the disclosed databases, the data and fields of these databases, as well as the number of databases, can be readily modified from the described embodiments, for example, to include more or fewer data fields.

FEDI file database **522** maintained in collector terminal **500** contains a listing of information relating to payments and disbursements for use by collector terminal **500**. FIGS. **8A** and **8B** illustrate a sample of the contents of FEDI file database **522**, with FIG. **8A** depicting a sample of the contents of a FEDI file in the CCD format and FIG. **8B** depicting a sample of a FEDI file in the CTX format.

As shown in FIG. **5A**, using the CCD format, FEDI file database **522** contains eleven fields with data element names corresponding to, for example, record type code, transaction code, receiving depository financial institution (DFI) identification, check digit, DFI account number, amount, identification number, receiving company name, discretionary data, addenda record indicator, and trace number. FIG. **8A** also indicates the attributes of each field. After the field row and the data element name row, the field inclusion requirement row indicates the requirements for each of the eleven fields, "M" indicating a mandatory element, "R" indicating a required element, and "O" indicating an optional element. The contents row indicates a sample structure for the contents of each field, and the link row indicates the length of characters available for each field. Finally, the position row indicates the position of the data element in the database record. The CCD format allows a database record of 94 characters.

For field **1**, located at position **01-01**, record type code allows a single character, which the example shows as a "6."

For field **2**, located at position **02-03**, transaction code encompasses two characters, which the example shows as requiring a numeric form.

For field **3**, located at position **04-11**, receiving DFI identification provides for 8 characters, which the example depicts in the form, "TTTTAAAA."

For field **4**, located at position **12-12**, check digit encompasses a single character, which the example shows as requiring a numeric form.

For field **5**, located at position **13-39**, DFI account number entails 17 characters, which the example shows as allowing any alphanumeric form.

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For field **6**, located at position **30-39**, amount provides for a character length of 10, which the example shows as \$\$\$\$\$\$\$\$ (thus, allowing a numerical entry of 999,999.99 or below).

For field **7**, located at position **40-54**, identification number spans 15 characters, which the example shows as allowing any alphanumeric form.

For field **8**, located at position **55-76**, receiving company name encompasses 22 characters, which the example shows as allowing any alphanumeric form.

For field **9**, located at position **77-76**, discretionary data involves only 2 characters, which the example shows as allowing any alphanumeric form.

For field **10**, located at position **79-79**, addenda record indicator allows a single character, which the example shows as requiring a numeric form.

For field **11**, located at position **80-94**, trace number encompasses a number of up to 15 characters, which the example shows as requiring a numeric form.

As shown in FIG. **8B**, using the CTX format, FEDI file database **522** may also contain thirteen fields with data element names corresponding to, for example, record type code, transaction code, receiving DFI identification, check digit, DFI account number, total amount, identification number, number of addenda records, receiving company name/ID number, reserved, discretionary data, addenda record indicator, and trace number. The CTX format also allows a database record of 94 characters. Indeed, the 13 fields of FIG. **8B** correspond to the fields described in FIG. **8A**, except that FIG. **8B** contains two additional fields, namely, number of addenda records (field **8**) and reserved (field **10**). For field **8**, located at position **55-58** of the addenda for the CTX format, number of addenda records encompasses 4 characters, which the example shows as requiring a numeric form; for field **10**, located at position **75-76** of the addenda for the CTX format, reserved provides for 2 characters, which the example indicates as "blank" due to the reserved status of this field. Otherwise, the fields of the CTX format correspond exactly to the fields of the CCD format. Indeed, both the CTX format and the CCD format contain 94 characters. Accordingly, FEDI file database **522** contains fields corresponding to either the CCD or CTX format, and in either case, the number of characters in the database for each record does not exceed 94.

Notably, FIGS. **8A** and **8B** only depict the fields for the EFT-portion of the FEDI file. Accordingly, these fields for the CCD and CTX formats operate according to the Operating Rules and Guidelines of the National Automated Clearinghouse Association (NACHA), hereby incorporated by reference.

Also maintained in collector terminal **500**, EDI addenda database **524** contains a listing of the information relating to disbursements either authorized by or required from initiators **110**. As shown in FIGS. **8A** and **8B**, the addenda record indicator (field **10** for CCD, field **12** for CTX) designates the presence or absence of an addenda record in an FEDI file. If this flag is positive, FIG. **9A** illustrates a sample of the contents of such an addenda record. As shown in FIG. **9A**, an addenda record contains five fields with data element names corresponding to, for example, record type code, addenda type code, payment related information, addenda sequence number, and entry detail sequence number. The row structure of the addenda record depicted in FIG. **9A** corresponds to the structure and contents of the rows in FIGS. **8A-8B**. Of the five fields shown in FIG. **9A**, payment

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related information (field 3) contains the pertinent disbursement information, in the context of EDI addenda database 524.

FIG. 9B illustrates a sample of the contents of EDI addenda database 524, in its preferred implementation of a payment and disbursement processing system for child support payments. As shown in FIG. 9B, EDI addenda database 524 contains records having fields with segment identifiers for deductions (DED) corresponding to, for example, application identifier DED01, case identifier DED02, pay date DED03, payment amount DED04, non-custodial parent social security number DED05, medical support indicator DED06, non-custodial parent name DED07, FIPS code DED08, an employment termination indicator DED09. Therefore, as shown in FIG. 9B, the addenda record for a child support payment contains nine segment identifiers.

Application identifier DED01 indicates the type of deduction being withheld from an employee's pay.

Case identifier DED02 is the case number or court order number that the child support receiving agency uses for the processing of payments and disbursements.

Pay date DED03 indicates the pay date or the date of income withholding from the non-custodial parent.

Payment amount DED04 indicates the amount of withholding from the pay of the non-custodial parent, which is paid to the child support receiving agency.

Non-custodial parent social security number DED05 provides the child support receiving agency with the social security number of the non-custodial parent.

Medical support indicator DED06 indicates whether the non-custodial parent has family medical insurance available through his or her employer.

Non-custodial parent name DED07 indicates the first seven letters of the last name of the non-custodial parent followed by at least three of the first three letters of his or her first name.

Federal information process standard (FIPS) code DED08 refers to the code used by the child support entity receiving the transaction, usually indicating the state and county of the child support entity.

Employment termination indicator DED09 is used to indicate to the child support enforcement agency that the non-custodial parent's employment has been terminated.

For the contents of an EDI addendum for child support payment and disbursement, FIG. 9B also indicates the mandatory and permissive attributes of each field. Attribute column 1 indicates the field requirement, "M" indicating a mandatory element and "O" indicating an optional element. Attribute column 2 indicates the data type, including "AN" for string type data, "DT" for date type data, "ID" for identifier data from a predefined list of values, and "N2" indicating a numeric type data with two decimal places to the right of a fixed decimal point (indicating a financial amount). Attribute column 3 indicates the minimum/maximum allowable length for the element, for example, $\frac{1}{20}$ indicates a minimum of one character and a maximum of 20 characters.

Of course, the example of the addenda requirements for a child support payment and disbursement are only one implementation of a system consistent with the present invention. Other implementations for payment and disbursement processing may also be used, such as, for example, alimony payments, payments on a judgment, payments on an attachment, tax payments, or even permissive payments, such as,

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for example, payments for investments or a mutual fund, payments upon a loan, or any other form of private or commercial obligation.

FEDI file database 622 maintained in accumulator agency server 600 contains a listing of information corresponding to FEDI file database 522. FEDI file database 622 contains those FEDI files transmitted to accumulator agency server 600 by collector terminals 500. Following transmission of these FEDI files, accumulator agency server 600 then validates the information, and if valid, segregates the EFT information from the EDI information. EFT debit database 624 contains the EFT information obtained from FEDI file database 622, and EDI addenda database 626 contains the EDI information obtained from FEDI file database 622. As described above, FIGS. 8A and 8B show samples of EFT information, and FIGS. 9A and 9B show samples of EDI information. EFT debit database 624 and EDI addenda database 626 contain information consistent with that shown in and described in connection with FIGS. 8A-8B and 9A-9B.

EDI addenda database 721 maintained in intermediary/recipient terminals 700 contains a listing of disbursement information corresponding to the EDI information transmitted to intermediary/recipient terminal 700 from accumulator agency server 600, which was transmitted to accumulator agency server 600 from collector terminals 500. EDI addenda database 721 contains information similar to that contained within EDI addenda database 524 and EDI addenda database 626. FIGS. 9A and 9B show samples of EDI information. Intermediary/recipient terminal 700 receives EDI transactions into EDI addenda database 721 from accumulator agency server 600 in order to process disbursements according to the information contained within the EDI addenda.

EFT credit database 723 maintained in intermediary/recipient terminal 700 contains information relating to payments processed through accumulator agency's bank 210 and ACH 220 for the purpose of later distribution and processing. In an implementation pertaining to child support, once initiator 110, or a non-custodial parent, has issued a payment through employer 410 to custodial parent 480, EFT credit database 723 indicates to intermediary/recipient terminal 700 (such as a terminal at a state child support agency) that the non-custodial parent has paid the obligation. Once the payment has occurred, intermediary/recipient terminal 700 may then authorize the disbursement to custodial parent 480.

Disbursement database 725, initiator database 727, and recipient database 729 maintained in intermediary/recipient terminal 700 enable authorization of disbursements pursuant to the information contained within EDI addenda database 721. Initiator database 727 contains a listing of the authorized initiators for payment processing, recipient database 729 contains a listing of the authorized recipients for disbursement processing, and disbursement database 729 contains a listing of disbursements authorized for processing. EFT credit database 723 thus indicates to disbursement database 725 whether a disbursement is authorized. Once a disbursement is authorized under disbursement database 725, intermediary/recipient terminal 700 transmits such authorization to accumulator agency server 600. Disbursement database 725 may also contain a historical database of prior disbursements. In an implementation pertaining to child support, for example, initiator database 727 would contain a listing of initiators 110, or non-custodial parents, recipient database 729 would contain a listing of custodial parents 480, and disbursement database 729 would contain

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the information regarding payments due by the non-custodial parents to custodial parents for child support obligations.

Process

In processing a payment and disbursement from collector 120 (such as an employer) based on an obligation of initiator 110 (such as an employee), the system shown and described in connection with FIG. 1 preferably executes several distinct modules, or processes. These processes include facilitating the accumulation of a payment and disbursement at collector 120 from initiator 110, transmitting the payment and disbursement information from collector 120 to accumulator agency 130, processing the payment via debit-based payment processing 140, and processing the disbursement via addendum-based disbursement processing 150. The steps associated with these processes are described in connection with FIGS. 10–21 and can be performed in any order, unless otherwise specified or dictated by the steps themselves.

In describing the processes consistent with the invention, various implementations of systems consistent with the invention are also described herein. For example, FIG. 10 illustrates a payment processing system consistent with the preferred embodiment of the invention as shown in FIG. 4. FIGS. 11 and 12 depict flow diagrams illustrating the series of steps performed by system 1000 as shown in FIG. 10. In initiating payment processing pursuant to the preferred embodiment, employer 410 (shown here as employers 412, 414, 416) receives a withholding order from initiator 110 (here, a non-custodial parent/employee), authorizing employer 410 to withhold funds from salary regarding a child support obligation (step 1110). If employer 410 receives a withholding order, the order will involve either a wage assignment income withholding or wage lien from a state agency or court ordering the withholding of funds from the salary of an employee pursuant to a child support obligation. Alternatively, an employee can also authorize an employer to withhold funds from his or her salary for a child support obligation. Whatever the form of authorization, once authorized, the employer converts the withholding obligation into a FEDI file (step 1120). This FEDI file may contain a payment with addendum information regarding disbursement in either the CCD or CTX formats. The FEDI file preferably is in the CTX format for greater efficiency and cost savings. Following the creation of the FEDI file, the employer then transmits the FEDI file to accumulator agency 130 (step 1130).

Once accumulator agency 130 receives the FEDI file from employer 410 (step 1202), accumulator agency 130 validates the FEDI transmission (step 1205). The validation of the FEDI transmission may include certification of the employer. In this certification process, accumulator agency 130 determines whether employer 410, which transmitted the FEDI file, is registered with accumulator agency 130. If employer 410 is not registered with accumulator agency 130, the FEDI file is rejected (step 1210). If employer 410 is registered with accumulator agency 130, employer 410 is certified and processing of the FEDI file continues. Note that this certification step is only one of many possible certification steps pursuant to methods consistent with the invention. Other certification steps may include, for example, validation of the data contained within the FEDI file.

Following certification of the employer, accumulator agency 130 initiates two transmissions. On the one hand, accumulator agency 130 sends an EDI file to state 460 (shown here as state A 462, state B 464, and state C 466)

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(step 1220). This EDI file indicates to state 460 that a payment has been made by initiator 110 (or, an employee) via employer 410. Once state 460 receives the EDI file, state 460 uses the information contained within the addendum and updates its records pertaining to the payment by the employee (step 1230). On the other hand, accumulator agency 130 also periodically accumulates EFT files for subsequent transmission (step 1240). Accumulator agency 130 preferably transmits EFT files by the use of a FEDI file. For example, using the CTX format, accumulator agency 130 can accumulate 9,999 EFT payment transactions for transmissions in a single FEDI file. Once accumulator agency 130 has created such a FEDI file, the file is transmitted to accumulator agency's bank 210 (step 1250).

Upon receipt of the FEDI file from accumulator agency 130, accumulator agency's bank 210 processes the payment transactions (step 1260). If accumulator agency 130 transmitted a FEDI file, accumulator agency's bank 210 segregates and processes the payments, but if accumulator agency 130 transmitted a single EFT file, then accumulator agency's bank 210 simply processes the single payment transaction. Once accumulator agency's bank 210 has accumulated and processed the payment transactions received from accumulator agency 130, accumulator agency's bank 210 then interacts with ACH 220. As done by accumulator agency 130, accumulator agency's bank 210 may also utilize FEDI when transacting with ACH 220. Thus, accumulator agency's bank may periodically accumulate and transmit payment transactions in the form of a FEDI file in the CTX format to ACH 220.

Once ACH 220 receives the payment transaction information from accumulator agency's bank 210, ACH 220 processes the payments as debit-based transactions. Accordingly, ACH 220 processes the payments as debit-based transactions by transmitting a debit transaction to employer's bank 440 (step 1280) and transmitting a credit transaction to state bank 470 (step 1270), such as, state A's bank 472, state B's bank 474, and state C's bank 476. Following the processing of these transactions by ACH 220, the payment obligation from employer's bank 440 is satisfied with regard to state 460, for example, including state 463, state 464 and state 466.

Although the system and processes described by FIGS. 10–12 describe the preferred embodiment for the payment processing system shown in FIG. 4, other implementations are also available. FIG. 13, for example, illustrates an alternative embodiment for a payment processing system consistent with the invention. FIGS. 14–15 depict flow diagrams illustrating the series of steps performed by system 1300 as shown in FIG. 13. Similar to system 1000 in FIG. 10 and the processes described in FIGS. 11–12, system 1300 allows collectors 120 (shown here as collector 1312, collector 1314, and collector 1316) to transmit payment information to accumulator agency 130 in alternative methods (step 1410). In contrast to the system and methods described in FIGS. 10–12, the system and methods consistent with this embodiment do not limit collector 120 to an employer. Otherwise, system 1300 and the associated methods operate similarly as system 1000 and its associated methods. Collectors 120 create a FEDI file (step 1420) and transmit the FEDI file to accumulator agency 130 (step 1430). Accumulator agency 130 then receives the FEDI file from collectors 120 (step 1502) and performs certification (step 1505).

If certification fails, the FEDI file is rejected (step 1510). If certification passes, accumulator agency 130 performs two steps. First, accumulator agency 130 sends an EDI file to intermediary/recipient 250 (step 1520). Upon receipt of

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the EDI file, intermediary/recipient **250** updates its records regarding the payment described in the EDI file (step **1530**). In contrast to the system and methods described in FIGS. **10–12**, the system and methods consistent with this embodiment do not limit intermediary/recipient **250** to a state. However, to show that payment transaction can be processed to multiple recipients, system **1300** distinguishes intermediary/recipients **1322**, **1324**, **1326**. Second, accumulator agency accumulates EFT files from the FEDI files received from collectors **120** and periodically creates combined FEDI files for later transmission (step **1540**). Accumulator agency **130** then transmits the FEDI file to accumulator agency's bank **210** (step **1550**). Accumulator agency's bank **220** then receives the FEDI file from accumulator agency **130** and processes the payment as a debit-based transaction via ACH **220** (step **1560**). ACH **220** subsequently performs two transactions: ACH **220** processes a debit transaction to collector's bank **1310** (step **1580**) and transmits a credit transaction to intermediary/recipient's bank **240**, here designated as intermediary/recipient A's bank **1332**, intermediary/recipient B's bank **1334**, and intermediary/recipient C's bank **1336** (step **1570**). Following these transactions, the payment obligation from intermediary/recipient's bank **240** is satisfied with regard to intermediary/recipient **250**, for example, including intermediary/recipient A **1322**, intermediary/recipient B **1324**, and intermediary/recipient C **1326**.

As described above, the system and methods associated with FIGS. **13–15** provide for a more dynamic payment processing system than the system and methods associated with FIGS. **10–12**. The system and methods consistent herewith allow for payment processing of mandatory as well as permissive obligations. Also, the system and methods consistent herewith allow for payment processing from entities other than non-custodial parents, through entities other than states, and to entities other than custodial parents.

FIG. **16** illustrates another alternative embodiment for a payment processing system consistent with the invention. Similar to system **1300**, described in FIG. **13**, system **1600** operates in the same manner as the system and methods disclosed in FIGS. **13–15**, except system **1600** allows accumulator agency **130** to transact directly with ACH **220**. In short, system **1600** allows accumulator agency **130** to function as a bank.

In system **1600**, collectors **120** (here shown as collector **1312**, collector **1314**, and collector **1316**) transmits payment information to accumulator agency **130**. Once accumulator agency **130** receives the FEDI file from collectors **120**, following certification, accumulator agency **130** then sends an EDI file to intermediary/recipient **250**, and accumulator agency **130** sends an FEDI file to a ACH **220**. Notably, in contrast to the system and methods described by FIGS. **10–15**, the system and methods consistent with FIG. **16** allow accumulator agency **130** to transact directly with ACH **220**. In this manner, accumulator agency **130** functions as a bank. Following the transactions between ACH **220** and accumulator agency **130**, ACH **220** processes the payments as debit-based transactions. In so doing, ACH **220** processes a debit transaction to collector's bank **1310** and transmits a credit transaction to intermediary/recipient's bank **240**. Like the system and methods consistent with the embodiment of the invention associated with FIGS. **13–15**, the system and methods consistent with FIG. **16** also provide for a more dynamic payment processing system. By allowing accumulator agency **130** to transact directly with ACH **220**, transaction steps are omitted that allow for a more efficient and thus timely processing of payments. Of course, the omission of this one step includes but one of many changes that can

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be made to the systems and methods for payment processing consistent with the invention.

FIG. **17** illustrates a disbursement processing system consistent with the preferred embodiment of the invention as shown in FIG. **4**. FIG. **18** depicts a flow diagram illustrating the series of steps performed by system **1700** as shown in FIG. **17**. In transacting disbursement processing pursuant to the preferred embodiment, state **460** (here shown as state A **462**, state B **464**, and state C **466**) computes the child support disbursement due to recipient **330** and transmits the disbursement information in an EDI file to accumulator agency **130** (step **1810**). Accumulator agency **130** receives the EDI file from state **460** and processes the disbursement (step **1820**). If the disbursement is a check (step **1825**), accumulator agency **130** prints the check and transmits it directly to custodial parent **480** (step **1830**). In system **1700**, the issuance of a check by accumulator agency **130** is transmitted to custodial parent A **482**. The issued check is drawn on the bank account of state **460**. In system **1700**, the check issued by accumulator agency **130** to custodial parent A **482** is drawn on state A's bank **472** (step **1835**).

If the disbursement is not a check, accumulator agency **130** must process an electronic transaction for the disbursement (step **1840**). To do so, accumulator agency **130** issues an EFT/FEDI transaction to accumulator agency's bank **210** (step **1842**) and accumulator agency's bank then transmits the transaction to ACH **220** (step **1845**). ACH **220** then transmits the EFT/FEDI transaction to state bank **470** (step **1850**). If the EFT/FEDI transaction is for a direct deposit (step **1855**), state bank **470** subsequently issues a direct deposit via ACH **220** (step **1860**). In system **1700**, the issuance of a direct deposit by accumulator agency **130** results in the transmission of a direct deposit to ACH **220**. ACH **220** then processes the direct deposit to custodial parent B's bank **490**. In so doing, ACH **220** issues a debit transaction to state B's bank **474** (step **1866**) and issues a credit transaction to custodial parent B's bank **490** (step **1867**). Thereby, custodial parent B **484** receives a disbursement in the form of a direct deposit (step **1868**).

If disbursement is not by direct deposit, accumulator agency **130** processes the disbursement as a debit deposit (step **1870**). In establishing a debit deposit, accumulator agency **130** has the option of where to locate the debit deposit account. In system **1700**, accumulator agency **130** establishes the direct deposit account at state C's bank **476**, by transmitting the debit deposit information via ACH **220**. Thereby, custodial parent C **486** receives the disbursement in the form of a debit account at state C's bank **476** (step **1880**). Alternatively, accumulator agency **130** can also establish a debit deposit account at accumulator agency's bank **210**. Additionally, although not depicted in FIG. **18**, the system and methods consistent with the preferred embodiment also contemplate the issuance of an invoice to custodial parent **480** for any disbursement (as indicated by the dotted line on FIG. **17**).

Although the system and processes described by FIGS. **17–18** describe the preferred embodiment for the disbursement processing system shown in FIG. **4**, other implementations are also available. FIG. **19**, for example, illustrates an alternative embodiment for a disbursement processing system consistent with the invention. FIG. **20** depicts a flow diagram illustrating the series of steps performed by system **1900** as shown in FIG. **19**. Similar to system **1700** in FIG. **17** and the processes described in FIG. **18**, system **1900** enables intermediary **310** to compute a payment due to recipient **330** and to transmit the disbursement information in an EDI file to accumulator agency **130** (step **2010**). In

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contrast to the system and methods described in FIGS. 17–18, the system and methods consistent with this embodiment do not limit intermediary 310 to a state. Otherwise, system 1900 and the associated methods operate similarly as system 1700 and its associated methods. Accumulator agency 130 receives the EDI file from intermediary 310 and processes the disbursement (step 2020). If the disbursement is a check (step 2025), accumulator agency 130 prints the check and transmits it directly to recipient 330 (step 2030). Again, in contrast to the system and methods described in FIGS. 17–18, the system and methods consistent with this embodiment do not limit recipient 330 to a custodial parent. However, to show that multiple disbursement transactions can be processed to multiple recipients, system 1900 distinguishes recipient A 1932, recipient B 1934, and recipient C 1936. As indicated in system 1900, the issuance of a check by accumulator agency 130 is transmitted to recipient A 1932. The issued check is drawn on the bank account of intermediary A's bank 1912. In system 1900, the check issued by accumulator agency 130 to recipient A 1932 is drawn on intermediary A's bank 1912 (step 2035).

If the disbursement is not a check, accumulator agency 130 must process an electronic transaction for the disbursement (step 2040). To do so, accumulator agency 130 issues an EFT/FEDI transaction to accumulator agency's bank 210 (step 2042) and accumulator agency's bank then transmits the transaction to ACH 220 (step 2045). ACH 220 then transmits the EFT/FEDI transaction to intermediary/recipient's bank 240 (step 2050). If the EFT/FEDI transaction is for direct deposit (step 2055), intermediary/recipient bank 240 subsequently issues a direct deposit via ACH 220 (step 2060). In system 1900, accumulator agency 130 issues a direct deposit to ACH 220, which results in the transmission of a direct deposit to intermediary B's bank 1914, which transacts with ACH 220 to process the direct deposit to recipient B's bank 1920. In so doing, ACH 220 issues a debit transaction to intermediary B's bank 1914 (step 2066) and issues a credit transaction to recipient B's bank 1920 (step 2067). Thereby, recipient B 1934 receives a disbursement in the form of a direct deposit (step 2068).

If disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit (step 2070). Similar to the system and methods described in FIGS. 17–18, in establishing a debit deposit, accumulator agency 130 has the option of where to locate the debit account. In system 1900, accumulator agency 130 establishes the direct deposit account at intermediary C's bank 1916, by transmitting the direct deposit information via ACH 220. Thereby, recipient C 1936 receives the disbursement in the form of a debit account at intermediary C's bank 1916 (step 2080). Alternatively, accumulator agency 130 can establish a debit deposit account at other locations, including accumulator agency's bank 210. Finally, although not depicted in FIG. 20, the system and methods consistent with this embodiment also contemplate the issuance of an invoice to recipient 330 for any disbursement (as indicated by the dotted line on FIG. 19).

As described above, the system and methods associated with FIGS. 19–20 provide for a more dynamic disbursement processing system than the system and methods associated with FIGS. 17–18. The system and methods consistent herewith allow for disbursement processing for mandatory as well as permissive obligations. Also, the system and methods allow for disbursement processing from entities other than non-custodial parents, through entities other than states, and to entities other than custodial parents.

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FIG. 21 illustrates another alternative embodiment for a disbursement processing system consistent with the invention. Similar to system 1900 described in FIG. 19, system 2100 operates in the same manner as the system and methods disclosed in FIGS. 19–20, except system 2100 allows accumulator agency 130 to transact directly with ACH 220. In short, system 2100 allows accumulator agency 130 to function as a bank.

In system 2100 intermediary 310 (here shown as intermediary A 1912, intermediary B 1914, and intermediary C 1916) computes the disbursement due to recipient 330 and transmits the disbursement information in an EDI file to accumulator 130. Accumulator agency 130 receives the EDI file from intermediary 310 and processes the disbursement. If the disbursement is a check, accumulator agency 130 issues the check consistent with the system and methods disclosed for system 1700 in FIGS. 19–20.

If the disbursement is not a check, accumulator agency 130 processes an electronic transaction for the disbursement by issuing an EFT/FEDI transaction directly to ACH 220. Notably, in contrast to the system and methods described by FIGS. 17–20, the system and methods consistent with FIG. 21 allow accumulator agency 130 to transact directly with ACH 220. In this manner accumulator agency 130 functions as a bank. If the EFT/FEDI transaction is for a direct deposit, accumulator agency 130 issues a direct deposit via ACH 220. In system 2100, accumulator agency 130 issues a direct deposit to ACH 220, and in so doing, issues a debit transaction to accumulator agency 130 and issues a credit transaction to recipient B's bank 1920. Thereby, recipient B 1934 receives a disbursement in the form of a direct deposit. Alternatively, if the disbursement is not by direct deposit, accumulator agency 130 processes the disbursement as a debit deposit. In establishing a debit deposit, accumulator agency 130 establishes a direct deposit account directly at accumulator agency 130. Thereby, accumulator agency 130 merely instructs recipient 1936 that a debit deposit account has been formed for its benefit. Although not depicted in FIG. 21, the system and methods consistent with this embodiment also contemplate the issuance of an invoice to recipient 330 for any disbursement (as indicated by the dotted line on FIG. 21).

Just as FIG. 16 describes a more dynamic payment processing system consistent with the invention by allowing accumulator agency 130 to function as a bank, the system and methods consistent with FIG. 21 enable the same advantages for a disbursement processing system. By allowing accumulator agency 130 to transact directly with ACH 220, transaction steps are omitted that allow for a more efficient and timely processing of disbursements. Of course, the omission of this one step includes but one of many changes that can be made to the systems and methods for disbursement processing consistent with the invention.

CONCLUSION

The systems consistent with the invention provide for more efficient and more economical methods for the processing of either or both payments and disbursements. The systems process payments using debit-based EFT and processes disbursements using addendum-based EDI. This improved payment and disbursement methodology provides many advantages over the current payment and disbursement technologies.

As described above, it will be apparent to those skilled in the art that various modifications and variations can be made in the processes of the present invention without departing

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from the spirit and scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention, provided they come within the scope of the appended claims and their equivalents. In this context, equivalents means each and every implementation for carrying out the functions recited in the claims, even if not explicitly described herein.

What is claimed is:

1. A method by an accumulator agency of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising:

receiving the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein receiving further comprises:

receiving an employer registration with the accumulator agency;

obtaining from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the obligation is a child support obligation, the employee is a noncustodial parent, and the recipient is a custodial parent, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, a withholding amount, a case number, a state disbursement unit's name, and a FIPS code;

establishing a payment as the debit transaction based on the payment information, wherein payment establishing further comprises:

setting a payment date for the payment;
validating the payment; and
authorizing the payment; and

establishing a disbursement as the disbursement transaction based on the disbursement information, wherein disbursement establishing further comprises:

setting a disbursement date for the disbursement;
validating the disbursement; and
authorizing the disbursement; and

transmitting the payment information from the accumulator agency to the bank via an automated clearing house by the payment date; and

transmitting the disbursement information from the accumulator agency to a state disbursement unit by the disbursement date.

2. The method of claim 1, wherein obtaining further comprises obtaining the payment and disbursement information by manual entry into a computer at the accumulator agency.

3. The method of claim 1, wherein obtaining further comprises receiving at the accumulator agency a file on diskette containing the payment and disbursement information.

4. The method of claim 1, wherein obtaining further comprises receiving at the accumulator agency an electronic file containing the payment and disbursement information.

5. The method of claim 1, wherein the obligation is owed pursuant to a court order.

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6. The method of claim 1, wherein the state disbursement unit is a governmental entity.

7. The method of claim 1, wherein the state disbursement unit is a nongovernmental entity.

8. The method of claim 1, wherein receiving occurs by electronic funds transfer (EFT).

9. The method of claim 1, wherein transmitting the payment information and transmitting the disbursement information occur by electronic funds transfer (EFT).

10. A system at an accumulator agency of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising:

a receiving component configured to receive the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein the receiving component further comprises:

a registration receiving component configured to receive an employer registration with the accumulator agency;

an obtaining component configured to obtain from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the obligation is a child support obligation, the employee is a noncustodial parent, and the recipient is a custodial parent, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, a withholding amount, a case number, a state disbursement unit's name, and a FIPS code;

an establishing a payment component configured to establish a payment as the debit transaction based on the payment information, wherein the establishing a payment component further comprises:

a payment setting component configured to set a payment date for the payment;

a payment validating component configured to validate the payment; and

a payment authorizing component configured to authorize the payment; and

an establishing a disbursement component configured to establish a disbursement as the disbursement transaction based on the disbursement information, wherein the establishing a disbursement component further comprises:

a disbursement setting component configured to set a disbursement date for the disbursement;

a disbursement validating component configured to validate the disbursement; and

a disbursement authorizing component configured to authorize the disbursement; and

a transmitting the payment information component configured to transmit the payment information from the accumulator agency to the bank via an automated clearing house by the payment date; and

a transmitting the disbursement information component configured to transmit the disbursement information from the accumulator agency to a state disbursement unit by the disbursement date.

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11. The system of claim 10, wherein the obtaining component further comprises an obtaining component configured to obtain the payment and disbursement information by manual entry into a computer at the accumulator agency.

12. The system of claim 10, wherein the obtaining component further comprises a receiving component configured to receive at the accumulator agency a file on diskette containing the payment and disbursement information.

13. The system of claim 10, wherein the obtaining component further comprises a receiving component configured to receive at the accumulator agency an electronic file containing the payment and disbursement information.

14. The system of claim 10, wherein the obligation is owed pursuant to a court order.

15. The system of claim 10, wherein the state disbursement unit is a governmental entity.

16. The system of claim 10, wherein the state disbursement unit is a nongovernmental entity.

17. The system of claim 10, wherein the receiving component uses electronic funds transfer (EFT).

18. The system of claim 10, wherein the transmitting the payment information component and the transmitting the disbursement information component use electronic funds transfer (EFT).

19. A computer readable medium containing instructions for controlling a computer system at an accumulator agency to perform a method of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, the method comprising:

receiving the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein receiving further comprises:

receiving an employer registration with the accumulator agency;

obtaining from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the obligation is a child support obligation, the employee is a noncustodial parent, and the recipient is a custodial parent, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, a withholding amount, a case number, a state disbursement unit's name, and a FIPS code;

establishing a payment as the debit transaction based on the payment information, wherein payment establishing further comprises:

setting a payment date for the payment;
validating the payment; and
authorizing the payment; and

establishing a disbursement as the disbursement transaction based on the disbursement information, wherein disbursement establishing further comprises:

setting a disbursement date for the disbursement;
validating the disbursement; and
authorizing the disbursement; and

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transmitting the payment information from the accumulator agency to the bank via an automated clearing house by the payment date; and

transmitting the disbursement information from the accumulator agency to a state disbursement unit by the disbursement date.

20. A system at an accumulator agency of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising:

receiving means for receiving the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein receiving further comprises:

receiving means for receiving an employer registration with the accumulator agency;

obtaining means for obtaining from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the obligation is a child support obligation, the employee is a noncustodial parent, and the recipient is a custodial parent, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, a withholding amount, a case number, a state disbursement unit's name, and a FIPS code;

establishing means for establishing a payment as the debit transaction based on the payment information, wherein payment establishing further comprises:

setting means for setting a payment date for the payment;

validating means for validating the payment; and
authorizing means for authorizing the payment; and

establishing means for establishing a disbursement as the disbursement transaction based on the disbursement information, wherein disbursement establishing further comprises:

setting means for setting a disbursement date for the disbursement;

validating means for validating the disbursement; and
authorizing means for authorizing the disbursement; and

transmitting means for transmitting the payment information from the accumulator agency to a bank via an automated clearing house by the payment date; and

transmitting means for transmitting the disbursement information from the accumulator agency to a state disbursement unit by the disbursement date.

21. A method by an accumulator agency of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising:

receiving the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein receiving further comprises:

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receiving an employer registration with the accumulator agency;

obtaining from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, and a withholding amount;

establishing a payment as the debit transaction based on the payment information, wherein establishing a payment further comprises authorizing the payment; and

establishing a disbursement as the disbursement transaction based on the disbursement information, wherein establishing a disbursement further comprises authorizing the disbursement;

transmitting the payment information from the accumulator agency to the bank via an automated clearing house; and

transmitting the disbursement information from the accumulator agency to the state.

22. The method of claim 21, wherein obtaining further comprises obtaining the payment and disbursement information by manual entry into a computer at the accumulator agency.

23. The method of claim 21, wherein obtaining further comprises receiving at the accumulator agency a file on a storage medium containing the payment and disbursement information.

24. The method of claim 21, wherein obtaining further comprises electronically receiving at the accumulator agency a file containing the payment and disbursement information.

25. The method of claim 21, wherein the obligation is a child support obligation, the employee is a noncustodial parent, and the recipient is a custodial parent.

26. The method of claim 21, wherein the payment and disbursement information further comprise at least a case number, a state's name, and a FIPS code.

27. The method of claim 21, wherein establishing a payment further comprises setting a payment date for the payment.

28. The method of claim 27, wherein transmitting the payment information occurs by the payment date.

29. The method of claim 21, wherein receiving further comprises validating the payment as the debit transaction based on the payment information.

30. The method of claim 21, wherein establishing a disbursement further comprises setting a disbursement date for the disbursement.

31. The method of claim 30, wherein transmitting the disbursement information occurs by the disbursement date.

32. The method of claim 21, wherein receiving further comprises validating the disbursement as the disbursement transaction based on the disbursement information.

33. The method of claim 21, wherein the obligation is owed pursuant to a court order.

34. The method of claim 21, wherein the state is a state disbursement unit.

35. The method of claim 21, wherein receiving occurs by electronic funds transfer.

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36. The method of claim 21, wherein transmitting the payment information and transmitting the disbursement information occur by electronic funds transfer.

37. A system at an accumulator agency of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising:

a receiving component configured to receive the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein the receiving component further comprises:

a registration receiving component configured to receive an employer registration with the accumulator agency;

an obtaining component configured to obtain from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, and a withholding amount;

an establishing a payment component configured to establish a payment as the debit transaction based on the payment information, wherein the payment establishing component further comprises authorizing the payment; and

an establishing a disbursement component configured to establish a disbursement as the disbursement transaction based on the disbursement information, wherein the disbursement establishing component further comprises authorizing the disbursement;

a transmitting the payment component configured to transmit the payment information from the accumulator agency to the bank via an automated clearing house; and

a transmitting the disbursement component configured to transmit the disbursement information from the accumulator agency to the state.

38. The system of claim 37, wherein the obtaining component further comprises an obtaining component configured to obtain the payment and disbursement information by manual entry into a computer at the accumulator agency.

39. The system of claim 37, wherein the obtaining component further comprises a receiving component configured to receive at the accumulator agency a file on a storage medium containing the payment and disbursement information.

40. The system of claim 37, wherein the obtaining component further comprises an electronically receiving component configured to electronically receive at the accumulator agency a file containing the payment and disbursement information.

41. The system of claim 37, wherein the obligation is a child support obligation, the employee is a noncustodial parent, and the recipient is a custodial parent.

42. The system of claim 37, wherein the payment and disbursement information further comprise at least a case number, a state's name, and a FIPS code.

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43. The system of claim 37, wherein the establishing a payment component further comprises a setting component configured to set a payment date for the payment.

44. The system of claim 43, wherein the transmitting the payment component occurs by the payment date.

45. The system of claim 37, wherein the receiving component further comprises a validating component configured to validate the payment as the debit transaction based on the payment information.

46. The system of claim 37, wherein the establishing a disbursement component further comprises a setting component configured to set a disbursement date for the disbursement.

47. The system of claim 46, wherein the transmitting the disbursement information component occurs by the disbursement date.

48. The system of claim 37, wherein the receiving component further comprises a validating component configured to validate the disbursement as the disbursement transaction based on the disbursement information.

49. The system of claim 37, wherein the obligation is owed pursuant to a court order.

50. The system of claim 37, wherein the state is a state disbursement unit.

51. The system of claim 37, wherein the receiving component uses electronic funds transfer.

52. The system of claim 37, wherein the transmitting the payment component and the transmitting the disbursement information component use electronic funds transfer.

53. A computer readable medium containing instructions for controlling a computer system at an accumulator agency to perform a method of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, the method comprising:

receiving the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein receiving further comprises:

receiving an employer registration with the accumulator agency;

obtaining from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, and a withholding amount;

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establishing a payment as the debit transaction based on the payment information, wherein payment establishing further comprises authorizing the payment; and

establishing a disbursement as the disbursement transaction based on the disbursement information, wherein disbursement establishing further comprises authorizing the disbursement;

transmitting the payment information from the accumulator agency to the bank via an automated clearing house; and

transmitting the disbursement information from the accumulator agency to the state.

54. A system at an accumulator agency of processing payment information through a bank and disbursement information to a governmental state entity of the United States, wherein the accumulator agency, the bank, and the state are separate entities, comprising:

receiving means for receiving the payment information and disbursement information at the accumulator agency, the payment information including at least a debit transaction and the disbursement information including at least a disbursement transaction, wherein the receiving means further comprises:

receiving means for receiving an employer registration with the accumulator agency;

obtaining means for obtaining from an employer payment and disbursement information that pertain to an obligation owed by an employee to a recipient, wherein the payment and disbursement information further comprise at least an employer's name, an employer's federal identification number, and banking information about the employer, and wherein the payment and disbursement information still further comprise at least an employee's name, an employee's social security number, and a withholding amount;

establishing means for establishing a payment as the debit transaction based on the payment information, wherein payment establishing further comprises authorizing the payment; and

establishing means for establishing a disbursement as the disbursement transaction based on the disbursement information, wherein disbursement establishing further comprises authorizing the disbursement;

transmitting means for transmitting the payment information from the accumulator agency to the bank via an automated clearing house; and

transmitting means for transmitting the disbursement information from the accumulator agency to the state.

* * * * *

EXHIBIT D

(12) **United States Patent**
Polk

(10) **Patent No.: US 6,567,821 B1**
(45) **Date of Patent: May 20, 2003**

(54) **METHOD AND APPARATUS FOR ELECTRONIC COLLECTION, TRANSLATION, GROUPING AND DELIVERY OF WAGE ASSIGNMENT INFORMATION**

(75) Inventor: **John Polk**, McLean, VA (US)
(73) Assignee: **ACS State & Local Solutions, Inc.**, Teaneck, NJ (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/200,943**
(22) Filed: **Nov. 30, 1998**

Related U.S. Application Data

(60) Provisional application No. 60/085,731, filed on May 15, 1998.
(51) **Int. Cl.⁷** **G06F 17/30**
(52) **U.S. Cl.** **707/104.1; 705/40**
(58) **Field of Search** 705/40; 707/104.1

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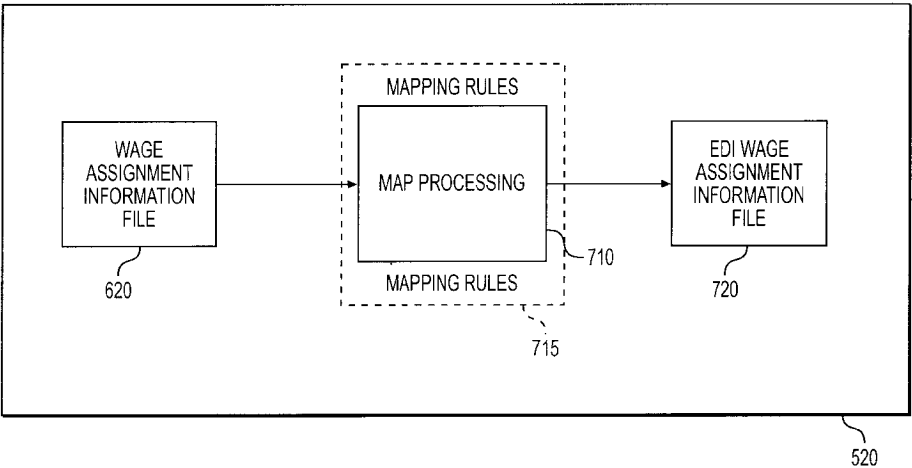
(List continued on next page.)

Primary Examiner—Wayne Amsbury
(74) *Attorney, Agent, or Firm*—Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.

(57) **ABSTRACT**

This disclosure describes a system that electronically collects, translates, groups, and delivers wage assignment information from at least one initiator to at least one recipient via an accumulator. An initiator initially receives the wage assignment information. Then, an accumulator collects the wage assignment information from at least one initiator, such as a government agency. The accumulator then translates the wage assignment information into a format compatible with electronic data interchange (EDI), such as the ANSI X12 standard. The accumulator then groups the EDI wage assignment information into specific files, batching the files based upon one data field contained within the wage assignment information data set, such as a recipient. The accumulator then delivers a batched EDI wage assignment file to each respective recipient. Once the EDI wage assignment file is received by the recipient, the wage assignment may then be implemented.

44 Claims, 46 Drawing Sheets



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Page 2

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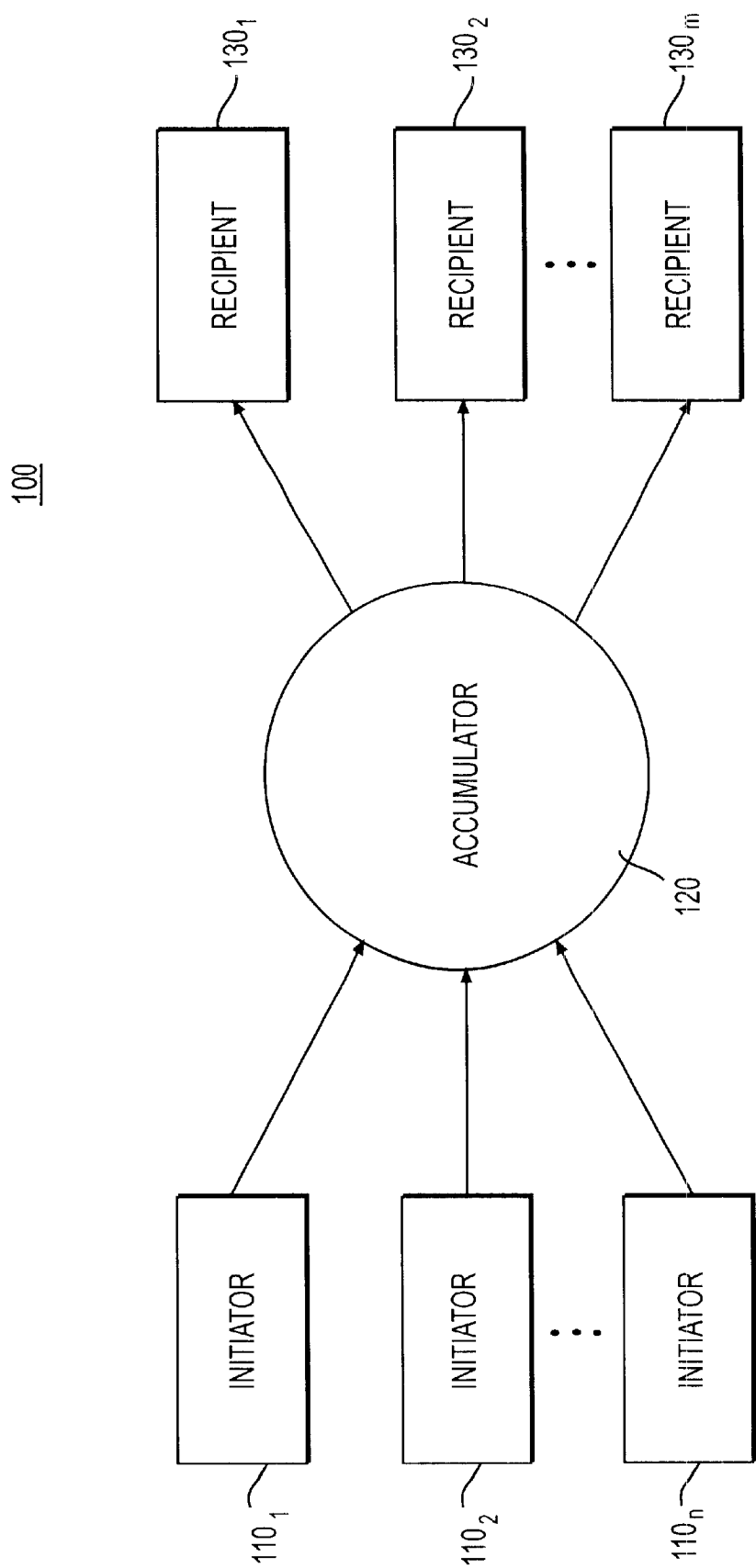


FIG. 1

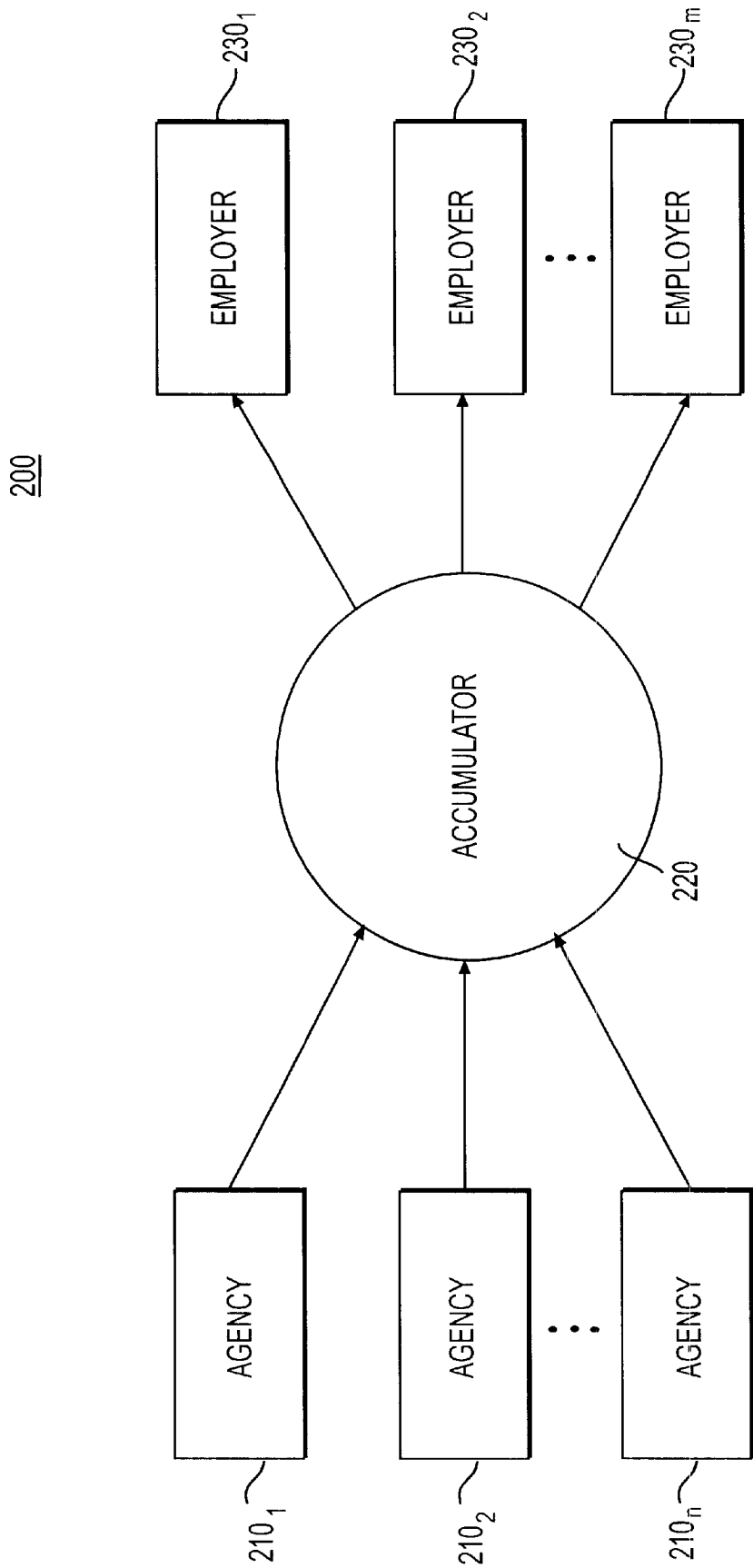


FIG. 2A

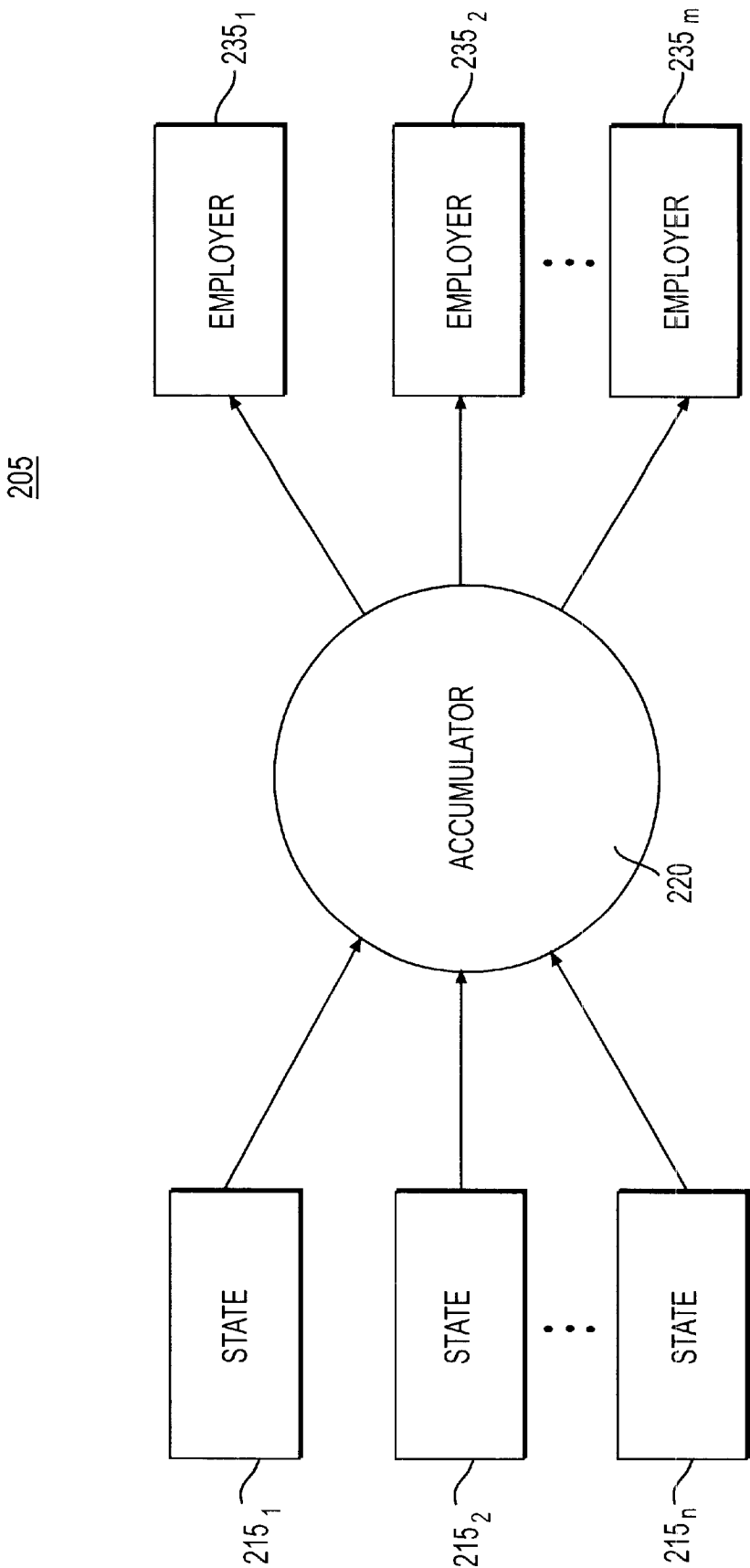


FIG. 2B

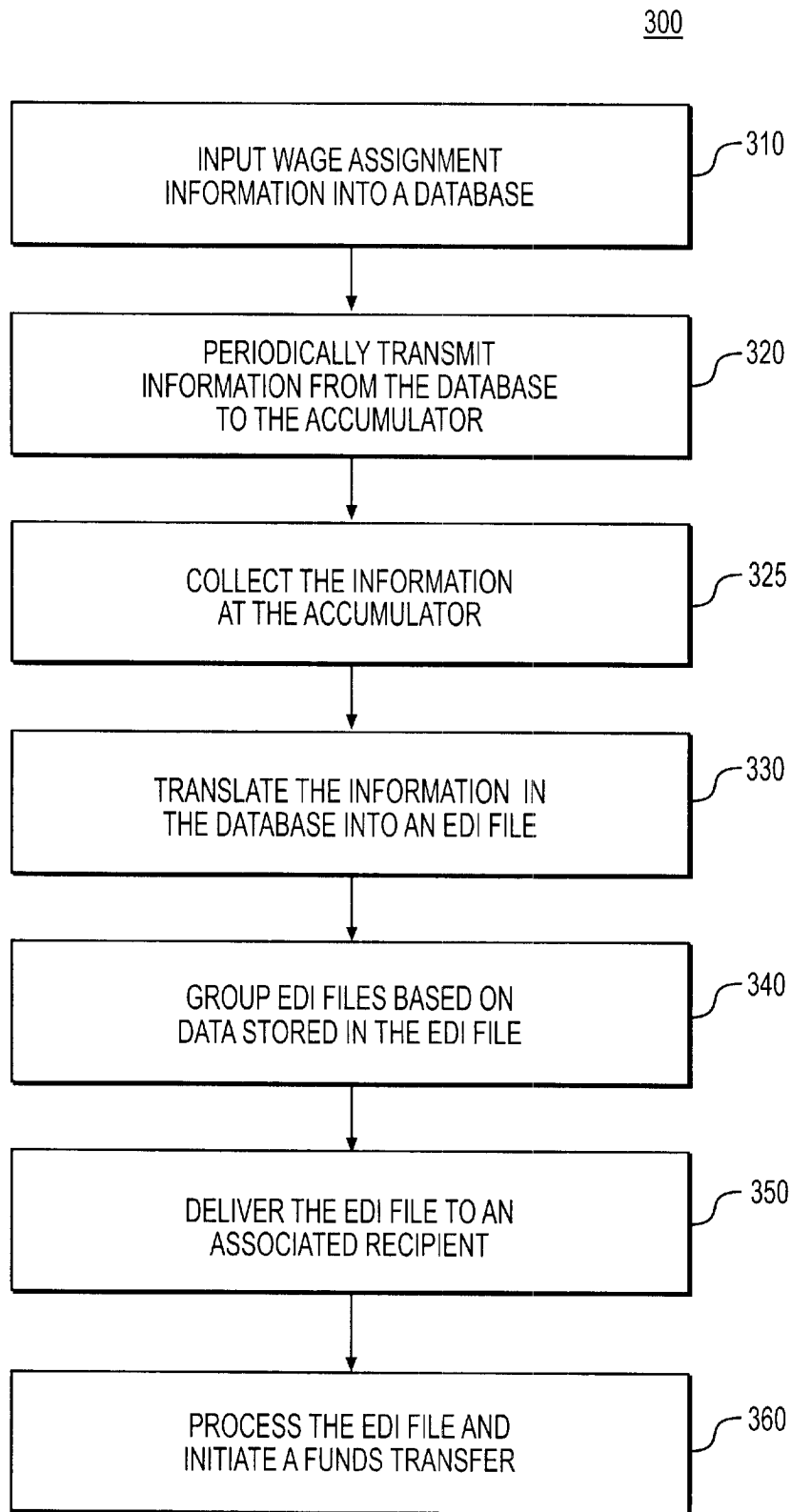


FIG. 3

400

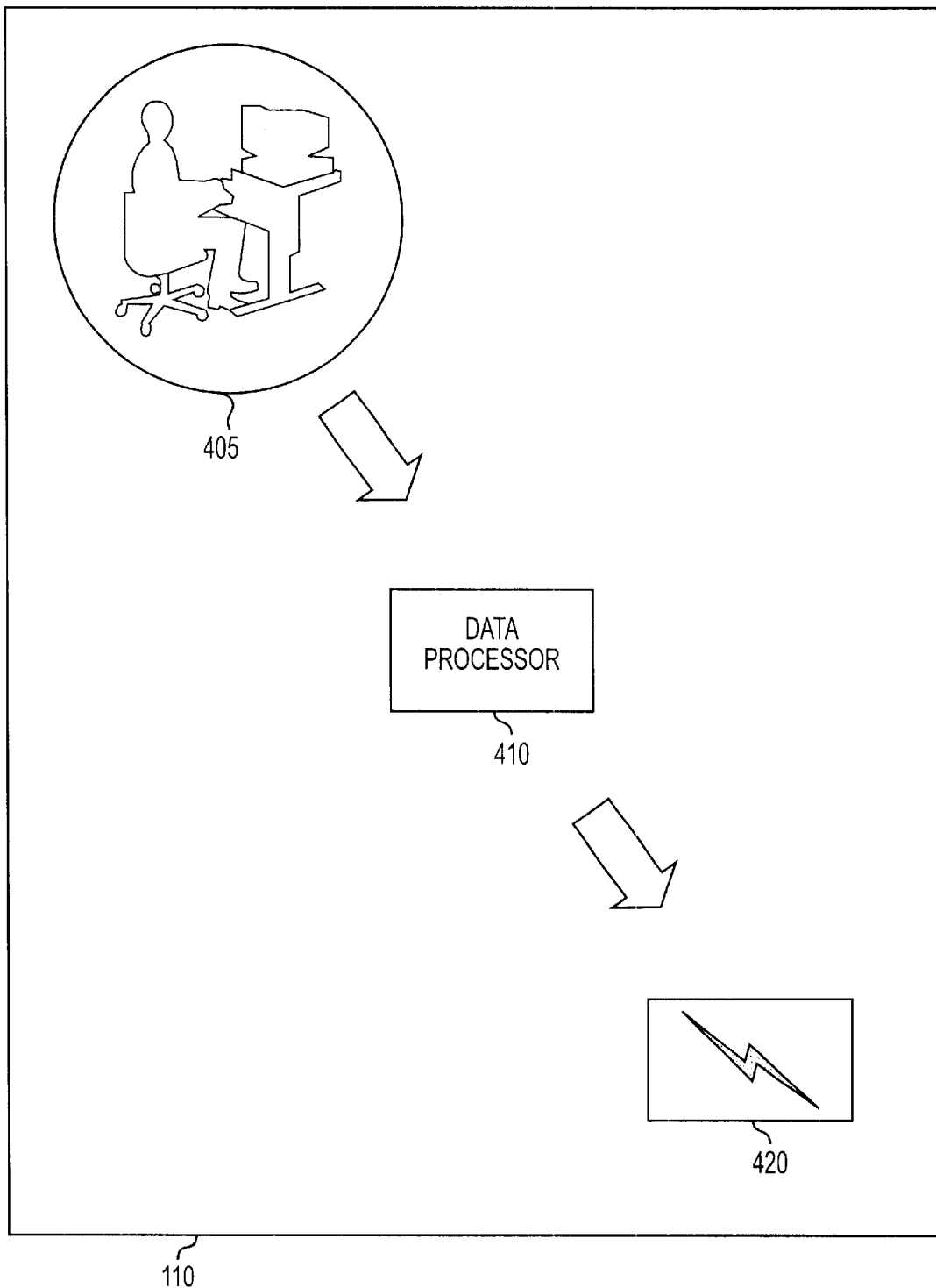


FIG. 4

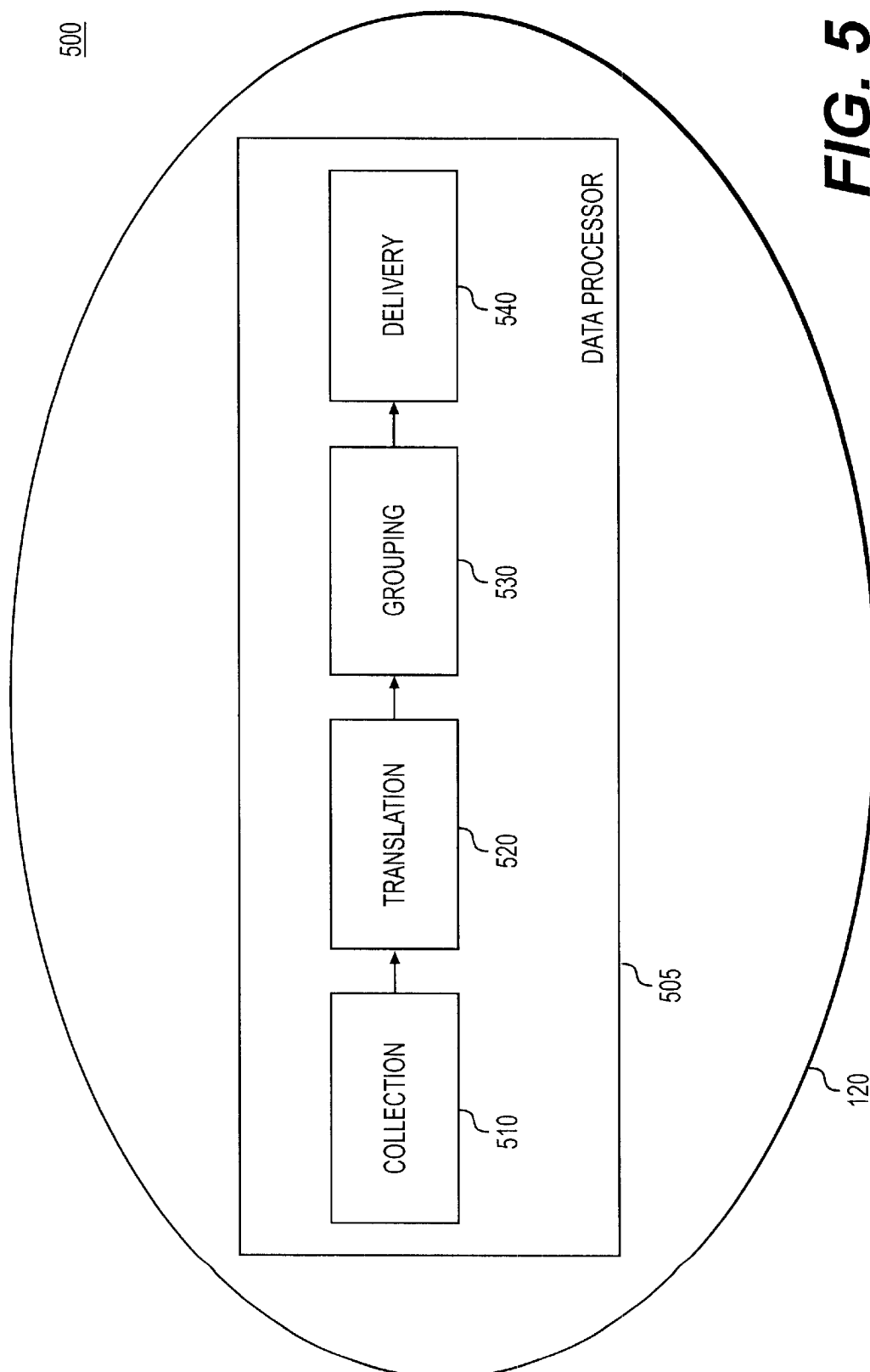
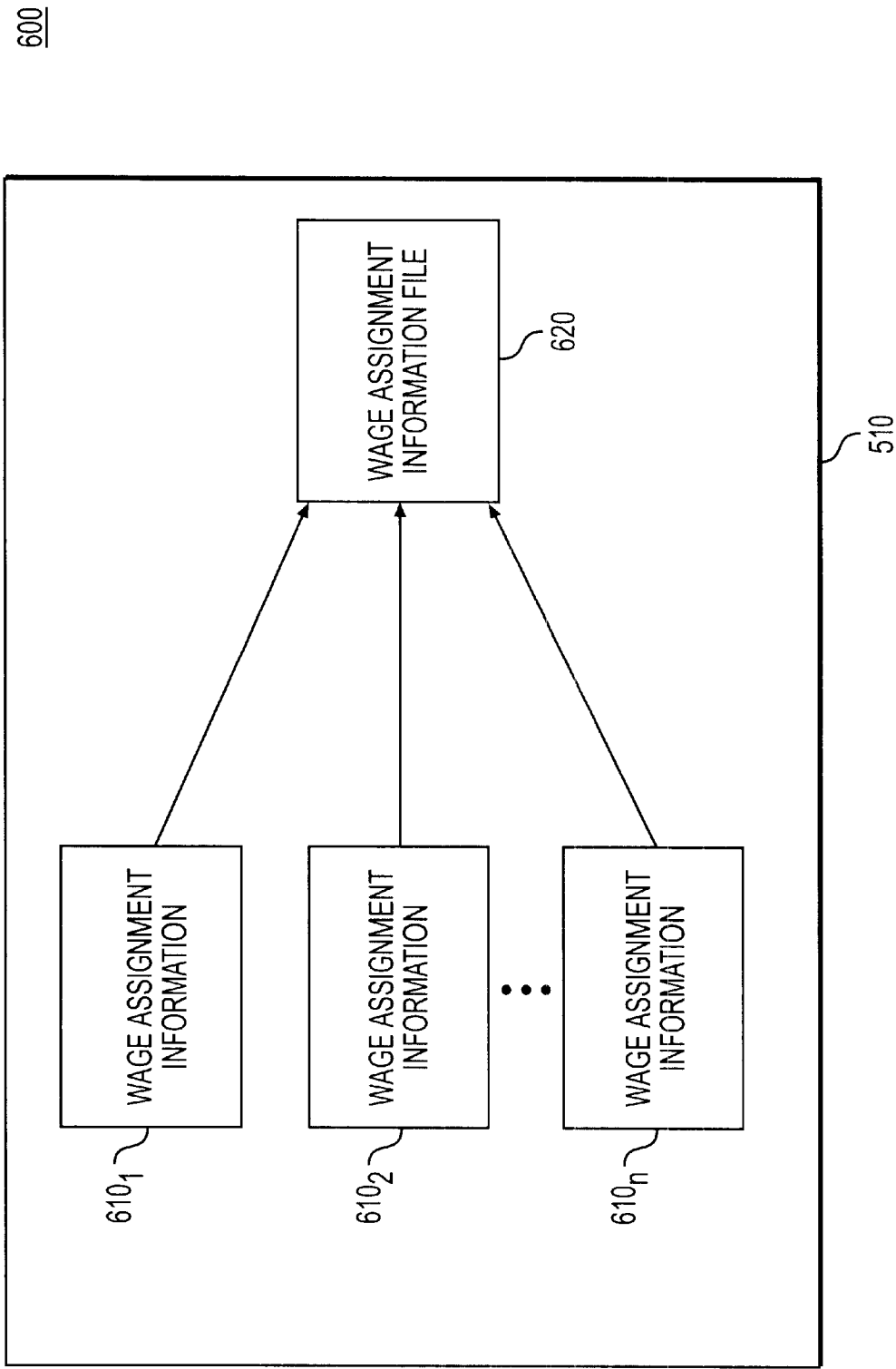


FIG. 5



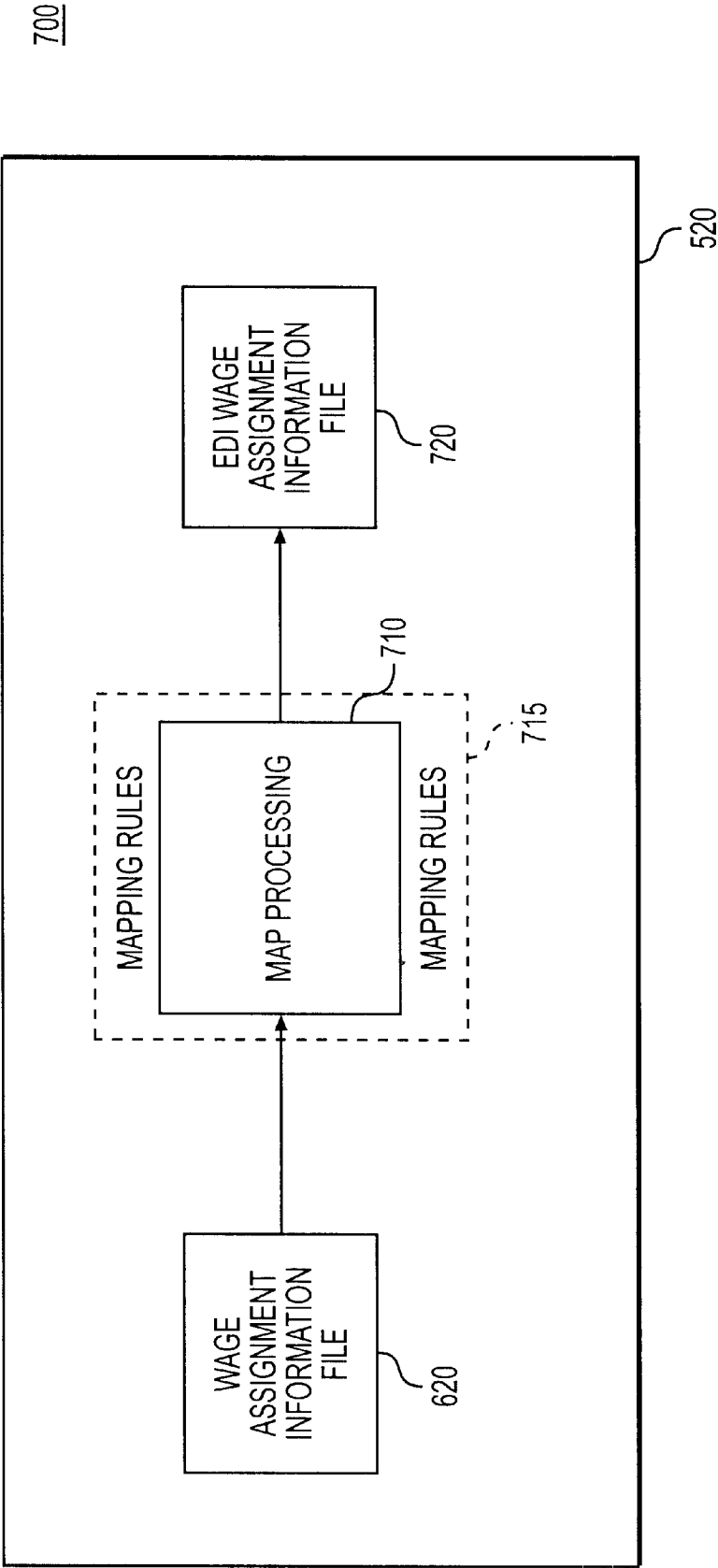
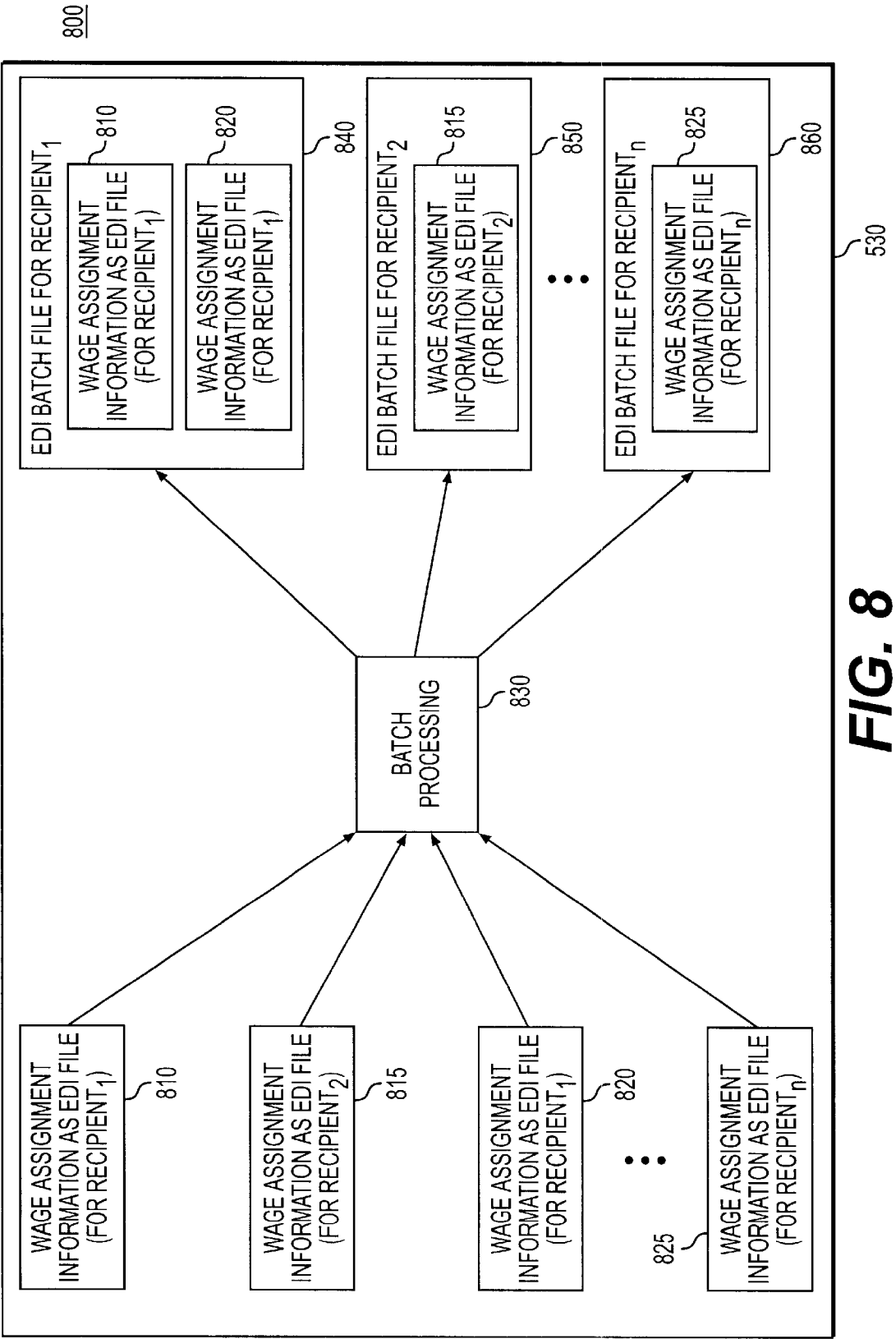


FIG. 7



900

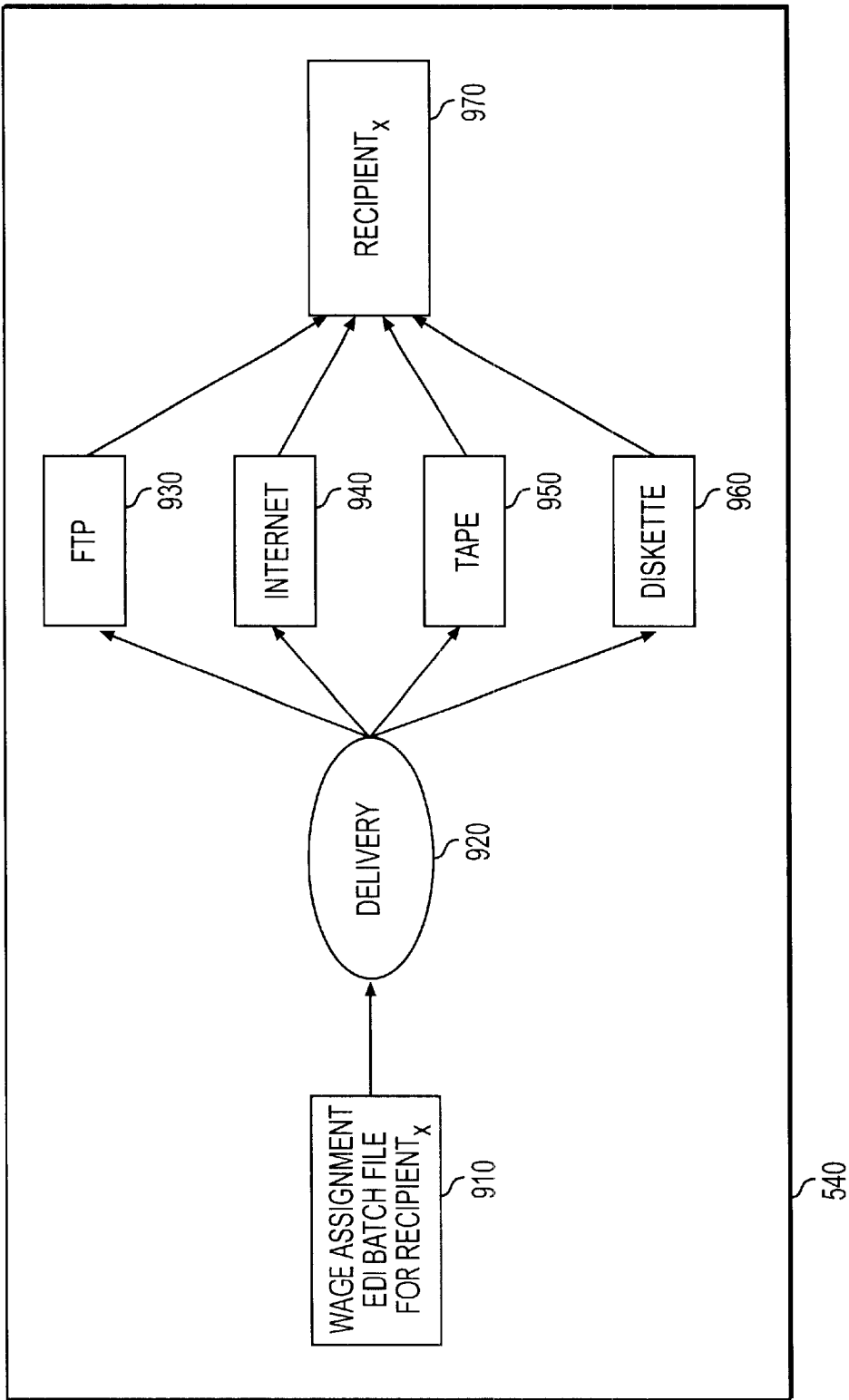


FIG. 9

1000

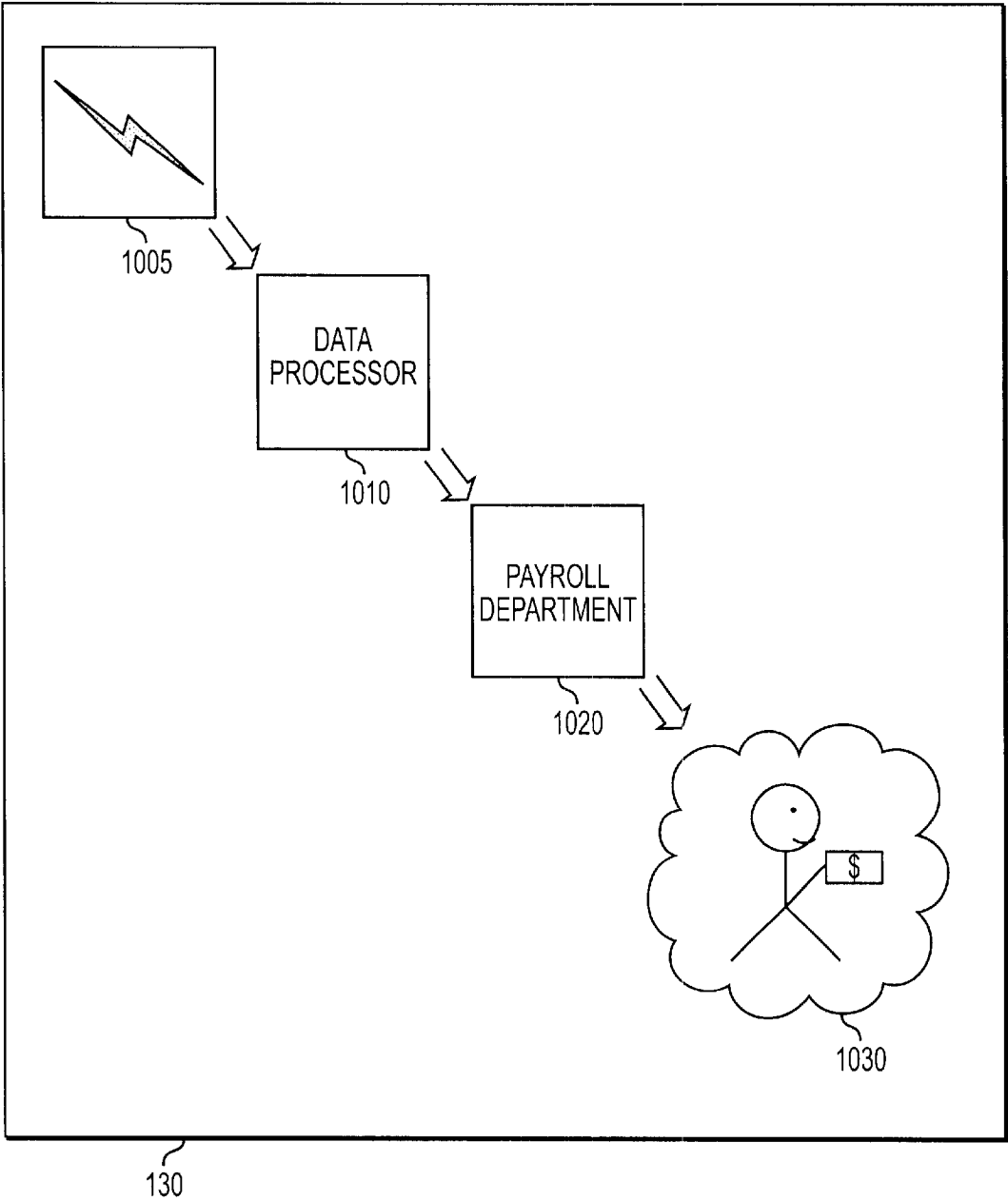


FIG. 10

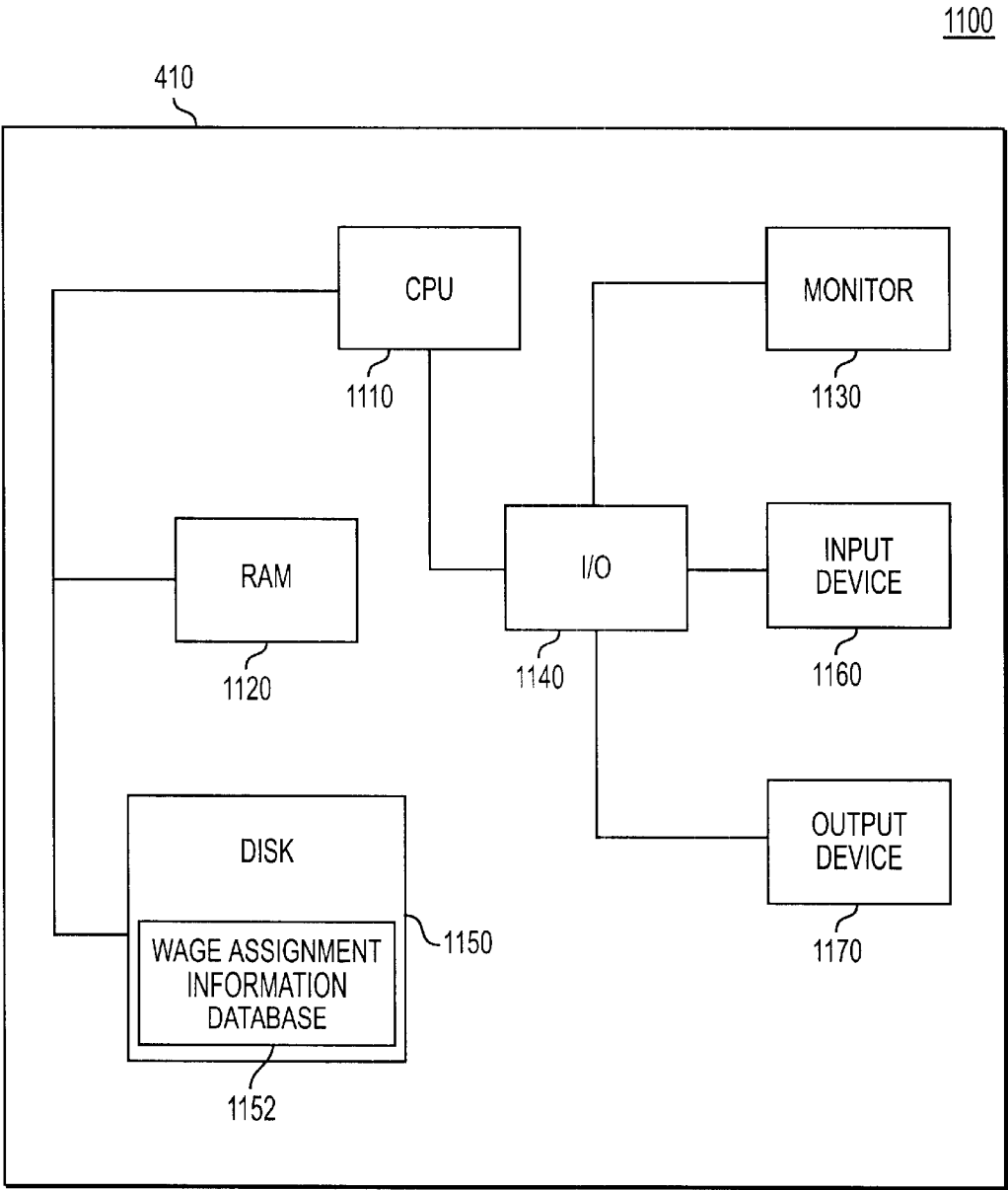


FIG. 11

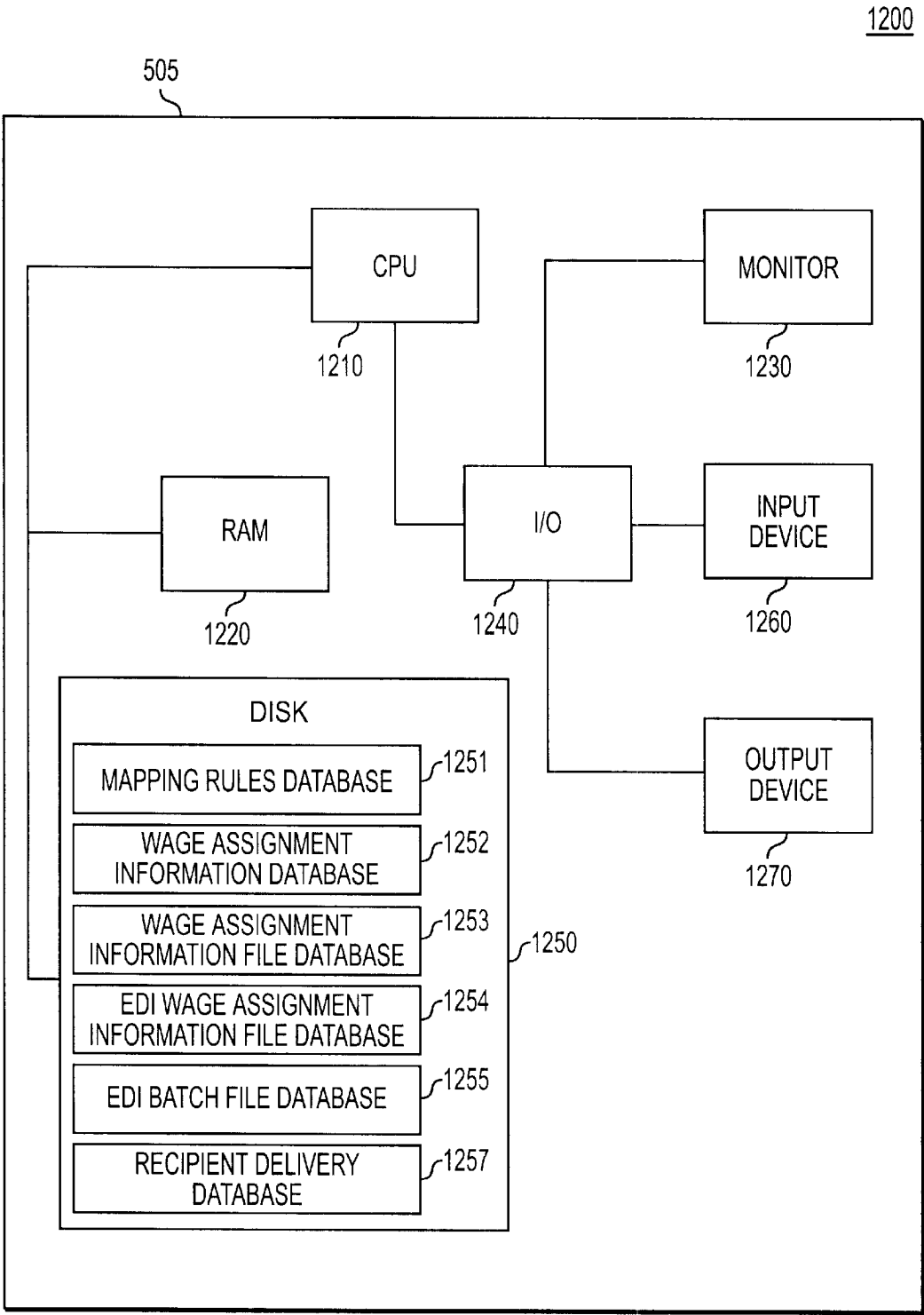


FIG. 12

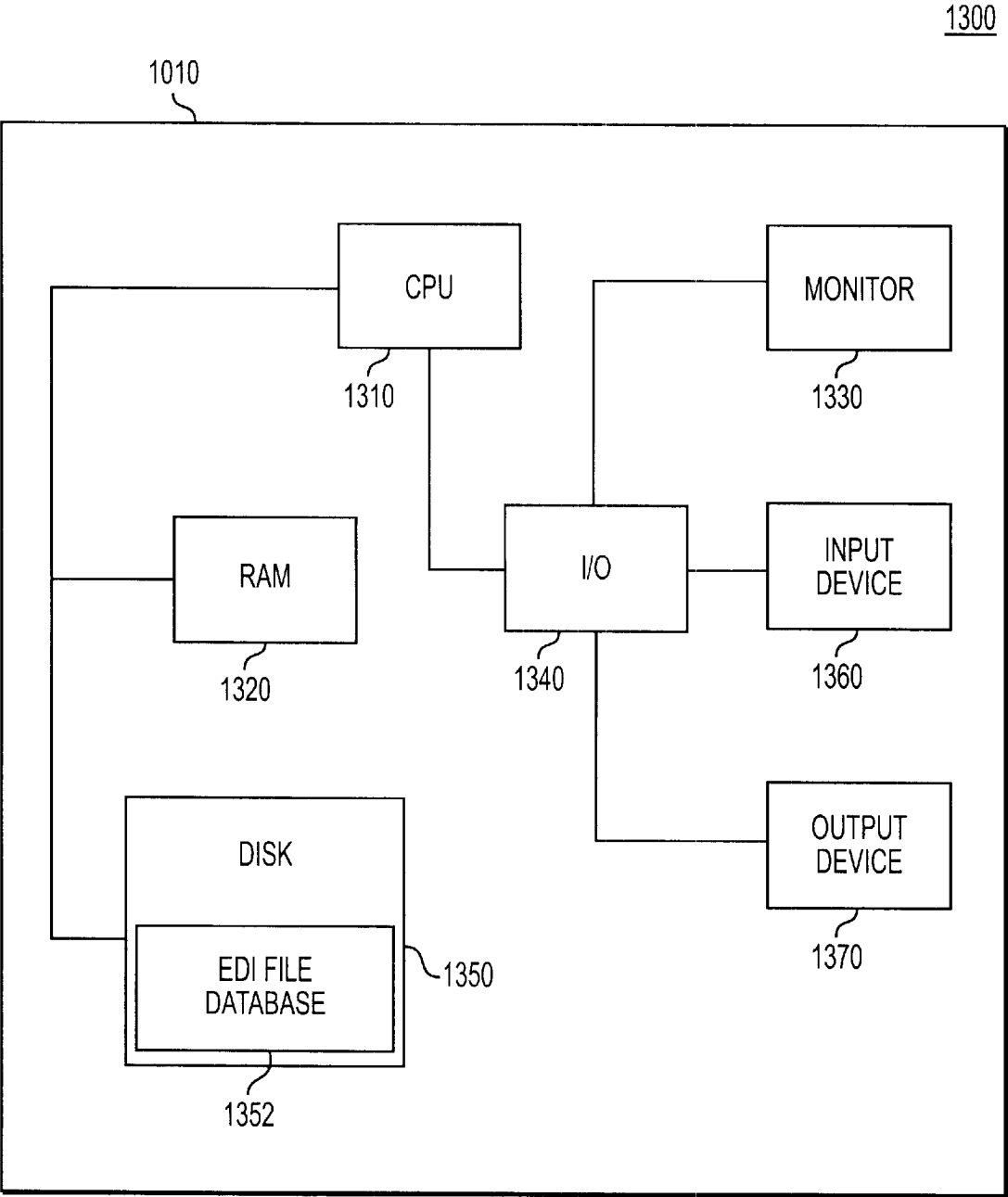


FIG. 13

1400

ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT

CO./CITY/DIST. OF

DATE OF ORDER/NOTICE

COURT/CASE NUMBER

EMPLOYER/WITHHOLDER'S FEDERAL EIN NUMBER

EMPLOYER/WITHHOLDER'S NAME

EMPLOYER/WITHHOLDER'S ADDRESS

CHILD(REN)'S NAME(S): DOB

ORIGINAL ORDER/NOTICE

AMENDED ORDER/NOTICE

RE: EMPLOYER/OBLIGOR'S (LAST, FIRST, MI)

RE: EMPLOYER/OBLIGOR'S SOCIAL SECURITY NUMBER

RE: EMPLOYER/OBLIGOR'S CASE IDENTIFIER

RE: CUSTODIAL PARENT'S (LAST, FIRST, MI)

CHILD(REN)'S NAME(S): DOB

ORDER INFORMATION: THIS IS AN ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT BASED UPON AN ORDER FOR SUPPORT FROM BY LAW, YOU ARE REQUIRED TO DEDUCT THESE AMOUNTS FROM THE ABOVE-NAMED EMPLOYEE/OBLIGATOR'S INCOME UNTIL EVEN IF THE ORDER/NOTICE IS NOT ISSUED BY YOUR STATE.

IF CHECKED, YOU ARE REQUIRED TO ENROLL THE CHILD(REN) IDENTIFIED ABOVE IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THROUGH THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT.

\$ PER IN CURRENT SUPPORT

\$ PER IN PAST-DUE SUPPORT

\$ PER MEDICAL SUPPORT

\$ PER IN OTHER (SPECIFY)

FOR A TOTAL OF PER TO BE FORWARDED TO THE PAYEE BELOW.

YOU DO NOT HAVE TO VARY YOUR PAY CYCLE TO BE IN COMPLIANCE WITH THE SUPPORT ORDER. IF YOUR PAY CYCLE DOES NOT MATCH THE ORDERED SUPPORT PAYMENT CYCLE, USE THE FOLLOWING TO DETERMINE HOW MUCH TO WITHHOLD:

\$ PER WEEKLY PAY PERIOD.

\$ PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).

\$ PER BIWEEKLY PAY PERIOD (EVERY TWO WEEKS).

\$ PER MONTHLY PAY PERIOD.

REMITTANCE INFORMATION: FOLLOW THE LAWS AND PROCEDURES OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT EVEN IF SUCH LAWS AND PROCEDURES ARE DIFFERENT FROM THE PARAGRAPH:

FIG. 14A
(PRIOR ART)

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YOU MUST BEGIN WITHHOLDING NO LATER THAN THE FIRST PAY PERIOD OCCURING AFTER _____ WORKING DAYS AFTER THE DATE OF THIS ORDER/NOTICE. SEND PAYMENT WITHIN _____ WORKING DAYS OF THE PAYDATE/ DATE OF WITHHOLDING. YOU ARE ENTITLED TO DEDUCT A FEE OF _____ TO DEFRAY THE COST OF WITHHOLDING. THE TOTAL WITHHELD AMOUNT, INCLUDING YOUR FEE, CANNOT EXCEED _____% OF THE EMPLOYEE/ OBLIGOR'S AGGREGATE DISPOSABLE WEEKLY EARNINGS. FOR THE PURPOSE OF THE LIMITATION ON WITHHOLDING, THE FOLLOWING INFORMATION IS NEEDED (SEE #9 ON BACK):

ARREARS 12 WEEKS OR GREATER? ☐ YES ☐ NO EMPLOYEE/OBLIGOR SUPPORTS A SECOND FAMILY? ☐ YES ☐ NO

WHEN REMITTING PAYMENT PROVIDE THE PAYDATE/DATE OF WITHHOLDING AND THE CASE IDENTIFIER _____, IF REMITTED BY EFT/EDI, USE THE FIPS CODE: _____; BANK ROUTING CODE: _____. BANK ACCOUNT NUMBER: _____.

MAKE IT PAYABLE TO: _____

AUTHORIZED BY _____
PRINT NAME _____

SEND CHECK TO: _____

FIG. 14A (CONT)
(PRIOR ART)

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1400

ADDITIONAL INFORMATION TO EMPLOYERS AND OTHER WITHHOLDERS

☐ IF CHECKED YOU ARE REQUIRED TO PROVIDE A COPY OF THIS FORM TO YOUR EMPLOYEE.

1. PRIORITY: WITHHOLDING UNDER THIS ORDER/NOTICE HAS PRIORITY OVER ANY OTHER LEGAL PROCESS UNDER STATE LAW AGAINST THE SAME INCOME. FEDERAL TAX LEVIES IN EFFECT BEFORE RECEIPT OF THIS ORDER HAVE PRIORITY UNLESS OTHERWISE AGREED TO BY IRS.
2. COMBINING PAYMENTS: YOU CAN COMBINE WITHHELD AMOUNTS FROM MORE THAN ONE EMPLOYEE/OBLIGOR'S INCOME IN A SINGLE PAYMENT TO EACH AGENCY REQUESTING WITHHOLDING. YOU MUST, HOWEVER, SEPARATELY IDENTIFY THE PORTION OF THE SINGLE PAYMENT THAT IS ATTRIBUTABLE TO EACH EMPLOYEE/OBLIGOR.
3. REPORTING THE PAYDATE/DATE OF WITHHOLDING: YOU MUST REPORT THE PAYDATE OF WITHHOLDING WHEN SENDING THE PAYMENT. THE PAYDATE/DATE OF WITHHOLDING IS THE DATE ON WHICH THE EMPLOYEE IS PAID AND CONTROLS THE INCOME (THE DATE THE INCOME CHECK OR CASH IS GIVEN TO THE EMPLOYEE, OR THE DATE IN WHICH THE INCOME IS DEPOSITED DIRECTLY IN HIS/HER ACCOUNT).
4. EMPLOYEE/OBLIGOR WITH MULTIPLE SUPPORT WITHHOLDINGS: IF THERE IS MORE THAN ONE ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT AGAINST THIS EMPLOYEE/OBLIGOR AND YOU ARE UNABLE TO HONOR ALL SUPPORT ORDERS/NOTICES DUE TO FEDERAL OR STATE WITHHOLDING LIMITS, YOU MUST IMMEDIATELY CONTACT THE AGENCY THAT SENT THE MOST RECENT ORDER/NOTICE TO DETERMINE HOW TO DIVIDE THE WITHHELD INCOME. CONTINUE WITHHOLDING BY HONORING CURRENT SUPPORT ORDER FIRST. THE LAW OF EMPLOYEE'S PRINCIPAL PLACE OF EMPLOYMENT WILL GOVERN ALLOCATION.
5. TERMINATION NOTIFICATION: YOU MUST PROMPTLY NOTIFY THE PAYEE WHEN THE EMPLOYEE/OBLIGOR NO LONGER WORKS FOR YOU. PLEASE PROVIDE THE INFORMATION REQUESTED AND RETURN A COPY OF THIS ORDER/NOTICE TO THE AGENCY IDENTIFIED BELOW.
 DATE OF SEPERATION _____
 LAST KNOWN HOME ADDRESS _____
 NEW EMPLOYER'S ADDRESS _____
6. LUMP SUM PAYMENTS: YOU MAY BE REQUIRED TO REPORT AND WITHHOLD FROM LUMP SUM PAYMENTS SUCH AS BONUSES, COMMISSIONS, OR SEVERANCE PAY. IF YOU HAVE ANY QUESTIONS ABOUT LUMP SUM PAYMENTS, CONTACT THE PERSON OF AUTHORITY BELOW.
7. LIABILITY: IF YOU FAIL TO WITHHOLD INCOME AS THE ORDER/NOTICE DIRECTS, YOU ARE LIABLE FOR BOTH THE ACCUMULATED AMOUNT YOU SHOULD HAVE WITHHELD FROM THE EMPLOYEE/OBLIGOR'S INCOME AND ANY OTHER PENALTIES SET BY STATE LAW.

FIG. 14B
(PRIOR ART)

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1400

8. ANTI-DISCRIMINATION: YOU ARE SUBJECT TO A FINE DETERMINED UNDER STATE LAW FOR DISCHARGING AN EMPLOYEE/OBLIGOR FROM EMPLOYMENT, REFUSING TO EMPLOYEE, OR TAKING DISCIPLINARY ACTION AGAINST ANY EMPLOYEE/OBLIGOR BECAUSE OF A CHILD SUPPORT WITHHOLDING.

9. WITHHOLDING LIMITS: YOU MAY NOT WITHHOLD MORE THAN THE LESSER OF: 1) THE AMOUNT ALLOWED BY THE FEDERAL CONSUMER CREDIT PROTECTION ACT (15 U.S.C. § 1673 (b)); OR 2) THE AMOUNTS ALLOWED BY THE STATE OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT. THE FEDERAL LIMIT APPLIES TO THE AGGREGATE DISPOSABLE WEEKLY EARNINGS (ADWE). ADWE IS THE NET INCOME LEFT AFTER MAKING MANDATORY DEDUCTIONS SUCH AS: STATE, FEDERAL, LOCAL TAXES; SOCIAL SECURITY TAXES; AND MEDICARE TAXES. THE FEDERAL CCPA LIMIT IS 50% OF THE ADWE FOR CHILD SUPPORT AND ALIMONY, WHICH IS INCREASED BY :) 1) 10% IF THE EMPLOYEE DOES NOT SUPPORT A SECOND FAMILY; AND/OR 2) 5% IF ARREARS ARE MORE THAN 12 WEEKS OLD, (SEE BOXES ON FRONT)

10.

REQUESTING AGENCY

IF YOU OR YOUR EMPLOYEE/OBLIGOR HAVE ANY QUESTIONS, CONTACT:

BY TELEPHONE AT

 OR
BY FAX AT

FIG. 14B (CONT)
(PRIOR ART)

1500

ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT

VIRGINIA

CO./CITY/DIST. OF ALEXANDRIA

DATE OF ORDER/NOTICE 6/12/98

COURT/CASE NUMBER 98-123

432165

EMPLOYER/WITHHOLDER'S FEDERAL EIN NUMBER Y CORP.

EMPLOYER/WITHHOLDER'S NAME 123 MAIN STREET

EMPLOYER/WITHHOLDER'S ADDRESS ANYTOWN, VA

12345-0000

ORIGINAL ORDER/NOTICE

AMENDED ORDER/NOTICE

RE: DOE, JOHN

EMPLOYER/OBLIGOR'S (LAST, FIRST, MI)

RE: 123-45-6789

EMPLOYER/OBLIGOR'S SOCIAL SECURITY NUMBER

RE: 98-123

EMPLOYER/OBLIGOR'S CASE IDENTIFIER

RE: DOE, JANE

CUSTODIAL PARENT'S (LAST, FIRST, MI)

CHILD(REN)'S NAME(S): DOB

DOE, SUSIE 6/1/1990

CHILD(REN)'S NAME(S): DOB

ORDER INFORMATION: THIS IS AN ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT BASED UPON AN ORDER FOR SUPPORT FROM VIRGINIA . BY LAW, YOU ARE REQUIRED TO DEDUCT THESE AMOUNTS FROM THE ABOVE-NAMED EMPLOYEE/OBLIGATOR'S INCOME UNTIL 6/1/2008 EVEN IF THE ORDER/NOTICE IS NOT ISSUED BY YOUR STATE.

☐ IF CHECKED, YOU ARE REQUIRED TO ENROLL THE CHILD(REN) IDENTIFIED ABOVE IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THROUGH THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT.

\$ 800.00

PER MONTH

IN CURRENT SUPPORT

\$ PER

IN PAST-DUE SUPPORT

\$ 100.00

PER MONTH

MEDICAL SUPPORT

\$ PER

IN OTHER (SPECIFY)

FOR A TOTAL OF \$900.00 PER MONTH TO BE FORWARDED TO THE PAYEE BELOW.

YOU DO NOT HAVE TO VARY YOUR PAY CYCLE TO BE IN COMPLIANCE WITH THE SUPPORT ORDER. IF YOUR PAY CYCLE DOES NOT MATCH THE ORDERED SUPPORT PAYMENT CYCLE, USE THE FOLLOWING TO DETERMINE HOW MUCH TO WITHHOLD:

\$ 207.00 PER WEEKLY PAY PERIOD.

\$ 450.00 PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).

\$ 414.00 PER BIWEEKLY PAY PERIOD. (EVERY TWO WEEKS).

\$ 900.00 PER MONTHLY PAY PERIOD.

REMITTANCE INFORMATION: FOLLOW THE LAWS AND PROCEDURES OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT EVEN IF SUCH LAWS AND PROCEDURES ARE DIFFERENT FROM THE PARAGRAPH:

FIG. 15A

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YOU MUST BEGIN WITHHOLDING NO LATER THAN THE FIRST PAY PERIOD OCCURING AFTER 30 WORKING DAYS AFTER THE DATE OF THIS ORDER/NOTICE. SEND PAYMENT WITHIN 7 WORKING DAYS OF THE PAYDATE/ DATE OF WITHHOLDING. YOU ARE ENTITLED TO DEDUCT A FEE OF \$50.00 TO DEFRAY THE COST OF WITHHOLDING. THE TOTAL WITHHELD AMOUNT, INCLUDING YOUR FEE, CANNOT EXCEED 40 % OF THE EMPLOYEE/ OBLIGOR'S AGGREGATE DISPOSABLE WEEKLY EARNINGS. FOR THE PURPOSE OF THE LIMITATION OF ON WITHHOLDING, THE FOLLOWING INFORMATION IS NEEDED (SEE #9 ON BACK):

ARREARS 12 WEEKS OR GREATER? ☐ YES ☒ NO EMPLOYEE/OBLIGOR SUPPORTS A SECOND FAMILY? ☐ YES ☒ NO

WHEN REMITTING PAYMENT PROVIDE THE PAYDATE/DATE OF WITHHOLDING AND THE CASE IDENTIFIER 98-123. IF REMITTED BY EFT/EDI, USE THE FIPS CODE: 54321; BANK ROUTING CODE: 98765. BANK ACCOUNT NUMBER: 4321.

MAKE IT PAYABLE TO: JANE DOE

AUTHORIZED BY
PRINT NAME JUDGE BLACK ROBE

SEND CHECK TO: 456 MAIN STREET
ANYTOWN, VA
12345-0000

FIG. 15A (CONT)

U.S. Patent**May 20, 2003****Sheet 21 of 46****US 6,567,821 B1**1500**ADDITIONAL INFORMATION TO EMPLOYERS AND OTHER WITHHOLDERS**

☐ IF CHECKED YOU ARE REQUIRED TO PROVIDE A COPY OF THIS FORM TO YOUR EMPLOYEE.

1. PRIORITY: WITHHOLDING UNDER THIS ORDER/NOTICE HAS PRIORITY OVER ANY OTHER LEGAL PROCESS UNDER STATE LAW AGAINST THE SAME INCOME. FEDERAL TAX LEVIES IN EFFECT BEFORE RECEIPT OF THIS ORDER HAVE PRIORITY UNLESS OTHERWISE AGREED TO BY IRS.
2. COMBINING PAYMENTS: YOU CAN COMBINE WITHHELD AMOUNTS FROM MORE THAN ONE EMPLOYEE/OBLIGOR'S INCOME IN A SINGLE PAYMENT TO EACH AGENCY REQUESTING WITHHOLDING. YOU MUST, HOWEVER, SEPARATELY IDENTIFY THE PORTION OF THE SINGLE PAYMENT THAT IS ATTRIBUTABLE TO EACH EMPLOYEE/OBLIGOR.
3. REPORTING THE PAYDATE/DATE OF WITHHOLDING: YOU MUST REPORT THE PAYDATE OF WITHHOLDING WHEN SENDING THE PAYMENT. THE PAYDATE/DATE OF WITHHOLDING IS THE DATE ON WHICH THE EMPLOYEE IS PAID AND CONTROLS THE INCOME (THE DATE THE INCOME CHECK OR CASH IS GIVEN TO THE EMPLOYEE, OR THE DATE IN WHICH THE INCOME IS DEPOSITED DIRECTLY IN HIS/HER ACCOUNT).
4. EMPLOYEE/OBLIGOR WITH MULTIPLE SUPPORT WITHHOLDINGS: IF THERE IS MORE THAN ONE ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT AGAINST THIS EMPLOYEE/OBLIGOR AND YOU ARE UNABLE TO HONOR ALL SUPPORT ORDERS/NOTICES DUE TO FEDERAL OR STATE WITHHOLDING LIMITS, YOU MUST IMMEDIATELY CONTACT THE AGENCY THAT SENT THE MOST RECENT ORDER/NOTICE TO DETERMINE HOW TO DIVIDE THE WITHHELD INCOME. CONTINUE WITHHOLDING BY HONORING CURRENT SUPPORT ORDER FIRST. THE LAW OF EMPLOYEE'S PRINCIPAL PLACE OF EMPLOYMENT WILL GOVERN ALLOCATION.
5. TERMINATION NOTIFICATION: YOU MUST PROMPTLY NOTIFY THE PAYEE WHEN THE EMPLOYEE/OBLIGOR NO LONGER WORKS FOR YOU. PLEASE PROVIDE THE INFORMATION REQUESTED AND RETURN A COPY OF THIS ORDER/NOTICE TO THE AGENCY IDENTIFIED BELOW.
 DATE OF SEPERATION _____
 LAST KNOWN HOME ADDRESS _____
 NEW EMPLOYER'S ADDRESS _____
6. LUMP SUM PAYMENTS: YOU MAY BE REQUIRED TO REPORT AND WITHHOLD FROM LUMP SUM PAYMENTS SUCH AS BONUSES, COMMISSIONS, OR SEVERANCE PAY. IF YOU HAVE ANY QUESTIONS ABOUT LUMP SUM PAYMENTS, CONTACT THE PERSON OF AUTHORITY BELOW.
7. LIABILITY: IF YOU FAIL TO WITHHOLD INCOME AS THE ORDER/NOTICE DIRECTS, YOU ARE LIABLE FOR BOTH THE ACCUMULATED AMOUNT YOU SHOULD HAVE WITHHELD FROM THE EMPLOYEE/OBLIGOR'S INCOME AND ANY OTHER PENALTIES SET BY STATE LAW.

FIG. 15B

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8. ANTI-DISCRIMINATION: YOU ARE SUBJECT TO A FINE DETERMINED UNDER STATE LAW FOR DISCHARGEING AN EMPLOYEE/ OBLIGOR FROM EMPLOYMENT, REFUSING TO EMPLOYEE, OR TAKING DISCIPLINARY ACTION AGAINST ANY EMPLOYEE/ OBLIGOR BECAUSE OF A CHILD SUPPORT WITHHOLDING.

9. WITHHOLDING LIMITS: YOU MAY NOT WITHHOLD MORE THAN THE LESSER OF: 1) THE AMOUNT ALLOWED BY THE FEDERAL CONSUMER CREDIT PROTECTION ACT (15 U.S.C. § 1673 (b)); OR 2) THE AMOUNTS ALLOWED BY STATE OF THE EMPLOYEE'S/ OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT. THE FEDERAL LIMIT APPLIES TO THE AGGREGATE DISPOSABLE WEEKLY EARNINGS (ADWE). ADWE IS THE NET INCOME LEFT AFTER MAKING MANDATORY DEDUCTIONS SUCH AS: STATE, FEDERAL, LOCAL TAXES; SOCIAL SECURITY TAXES; AND MEDICARE TAXES. THE FEDERAL CCPA LIMIT IS 50% OF THE ADWE FOR CHILD SUPPORT AND ALIMONY, WHICH IS INCREASED BY : 1) 10% IF THE EMPLOYEE DOES NOT SUPPORT A SECOND FAMILY; AND/OR 2) 5% IF ARREARS ARE MORE THAN 12 WEEKS OLD, (SEE BOXES ON FRONT)

10. _____
- _____
- _____
- _____

REQUESTING AGENCY _____

VIRGINIA CHILD SUPPORT DEPARTMENT _____

IF YOU OR YOUR EMPLOYEE/OBLIGOR HAVE ANY QUESTIONS, CONTACT:

JOHN G. CLERK _____

BY TELEPHONE AT 703-123-4567 OR

BY FAX AT 703-123-4567

FIG. 15B (CONT)

1600

1	2	3	4	5	6	7	8	...	n
VIRGINIA	JOHN DOE	123-45-6789	Y CORP.	ANYTOWN	VA	12345-0000	98-123		6/12/98

1152

FIG. 16

1700

1	2	3	4	5	6	7	8	...	n
VIRGINIA	JOHN DOE	123-45-6789	Y CORP.	ANYTOWN	VA	12345-0000	98-123		6/12/98

1252

FIG. 17

1800

1	2	3	4	5	6	7	8	9	...	n
I ₁	VIRGINIA	JOHN DOE	123-45-6789	Y CORP.	ANYTOWN	VA	12345-0000	98-123		6/12/98
I ₂	TENNESSEE	98-456	SOMETOWN	T. VOE	5321-0000	7/1/98	300-00-0001	X CORP.		TX
I ₂	OHIO	98-789	ANYTOWN	S. ROE	98765-0000	6/21/98	200-00-0001	Y CORP.		VA

1253

FIG. 18

1900

ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT

1a

CO./CITY/DIST. OF

1b

DATE OF ORDER/NOTICE

2

COURT/CASE NUMBER

3

5

EMPLOYER/WITHHOLDER'S FEDERAL EIN NUMBER

6a

EMPLOYER/WITHHOLDER'S NAME

6b

EMPLOYER/WITHHOLDER'S ADDRESS

6c

6d

6e

11

CHILD(REN)'S NAME(S):

DOB

4a

ORIGINAL ORDER/NOTICE

4b

AMENDED ORDER/NOTICE

7

RE: EMPLOYER/OBLIGOR'S (LAST, FIRST, MI)

8

RE: EMPLOYER/OBLIGOR'S SOCIAL SECURITY NUMBER

9

RE: EMPLOYER/OBLIGOR'S CASE IDENTIFIER

10

RE: CUSTODIAL PARENT'S (LAST, FIRST, MI)

14

CHILD(REN)'S NAME(S):

DOB

12

ORDER INFORMATION: THIS IS AN ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT BASED UPON AN ORDER FOR SUPPORT FROM

13

BY LAW, YOU ARE REQUIRED TO DEDUCT THESE AMOUNTS FROM THE ABOVE-NAMED EMPLOYEE/OBLIGATOR'S INCOME UNTIL

14

EVEN IF THE ORDER/NOTICE IS NOT ISSUED BY YOUR STATE.

14

IF CHECKED, YOU ARE REQUIRED TO ENROLL THE CHILD(REN) IDENTIFIED ABOVE IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THROUGH THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT.

15a

\$

15b

PER

15c

IN CURRENT SUPPORT

16a

\$

16b

PER

16c

IN PAST-DUE SUPPORT

17a

\$

17b

PER

17c

MEDICAL SUPPORT

18a

\$

18b

PER

18c

IN OTHER (SPECIFY)

19a

19b

20

21a

FOR A TOTAL OF

21b

PER

21c

TO BE FORWARDED TO THE PAYEE BELOW.

22a

YOU DO NOT HAVE TO VARY YOUR PAY CYCLE TO BE IN COMPLIANCE WITH THE SUPPORT ORDER. IF YOUR PAY CYCLE DOES NOT MATCH THE ORDERED SUPPORT PAYMENT CYCLE, USE THE FOLLOWING TO DETERMINE HOW MUCH TO WITHHOLD:

22b

\$

22c

PER WEEKLY PAY PERIOD.

22d

\$

22e

PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).

22f

\$

22g

PER BIWEEKLY PAY PERIOD. (EVERY TWO WEEKS).

22h

\$

22i

PER MONTHLY PAY PERIOD.

23

REMITTANCE INFORMATION: FOLLOW THE LAWS AND PROCEDURES OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT EVEN IF SUCH LAWS AND PROCEDURES ARE DIFFERENT FROM THE PARAGRAPH:

FIG. 19A
(PRIOR ART)

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YOU MUST BEGIN WITHHOLDING NO LATER THAN THE FIRST PAY PERIOD OCCURRING AFTER 23 WORKING DAYS AFTER THE DATE OF THIS ORDER/NOTICE. SEND PAYMENT WITHIN 24 WORKING DAYS OF THE PAYDATE/ DATE OF WITHHOLDING. YOU ARE ENTITLED TO DEDUCT A FEE OF 25 TO DEFRAY THE COST OF WITHHOLDING. THE TOTAL WITHHELD AMOUNT, INCLUDING YOUR FEE, CANNOT EXCEED 26 % OF THE EMPLOYEE/ OBLIGOR'S AGGREGATE DISPOSABLE WEEKLY EARNINGS. FOR THE PURPOSE OF THE LIMITATION ON WITHHOLDING, THE FOLLOWING INFORMATION IS NEEDED (SEE #9 ON BACK):

(27a) ARREARS 12 WEEKS OR GREATER? ☐ YES ☐ NO (27b) EMPLOYEE/OBLIGOR SUPPORTS A SECOND FAMILY? ☐ YES ☐ NO

WHEN REMITTING PAYMENT PROVIDE THE PAYDATE/DATE OF WITHHOLDING AND THE CASE IDENTIFIER 28a . IF REMITTING BY EFT/EDI, USE THE FIPS CODE: 28b ; BANK ROUTING CODE: 28c . BANK ACCOUNT NUMBER: 28d .

MAKE IT PAYABLE TO: 29a

AUTHORIZED BY 30a
PRINT NAME 30b

SEND CHECK TO: 29b

29c

29d

29e

FIG. 19A (CONT)
(PRIOR ART)

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1900

ADDITIONAL INFORMATION TO EMPLOYERS AND OTHER WITHHOLDERS

☐ IF CHECKED YOU ARE REQUIRED TO PROVIDE A COPY OF THIS FORM TO YOUR EMPLOYEE.

1. PRIORITY: WITHHOLDING UNDER THIS ORDER/NOTICE HAS PRIORITY OVER ANY OTHER LEGAL PROCESS UNDER STATE LAW AGAINST THE SAME INCOME. FEDERAL TAX LEVIES IN EFFECT BEFORE RECEIPT OF THIS ORDER HAVE PRIORITY UNLESS OTHERWISE AGREED TO BY IRS.
2. COMBINING PAYMENTS: YOU CAN COMBINE WITHHELD AMOUNTS FROM MORE THAN ONE EMPLOYEE/OBLIGOR'S INCOME IN A SINGLE PAYMENT TO EACH AGENCY REQUESTING WITHHOLDING. YOU MUST, HOWEVER, SEPARATELY IDENTIFY THE PORTION OF THE SINGLE PAYMENT THAT IS ATTRIBUTABLE TO EACH EMPLOYEE/OBLIGOR.
3. REPORTING THE PAYDATE/DATE OF WITHHOLDING: YOU MUST REPORT THE PAYDATE OF WITHHOLDING WHEN SENDING THE PAYMENT. THE PAYDATE/DATE OF WITHHOLDING IS THE DATE ON WHICH THE EMPLOYEE IS PAID AND CONTROLS THE INCOME (THE DATE THE INCOME CHECK OR CASH IS GIVEN TO THE EMPLOYEE, OR THE DATE IN WHICHN THE INCOME IS DEPOSITED DIRECTLY IN HIS/HER ACCOUNT).
4. EMPLOYEE/OBLIGOR WITH MULTIPLE SUPPORT WITHHOLDINGS: IF THERE IS MORE THAN ONE ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT AGAINST THIS EMPLOYEE/OBLIGOR AND YOU ARE UNABLE TO HONOR ALL SUPPORT ORDERS/NOTICES DUE TO FEDERAL OR STATE WITHHOLDING LIMITS, YOU MUST IMMEDIATELY CONTACT THE AGENCY THAT SENT THE MOST RECENT ORDER/NOTICE TO DETERMINE HOW TO DIVIDE THE WITHHELD INCOME. CONTINUE WITHHOLDING BY HONORING CURRENT SUPPORT ORDER FIRST. THE LAW OF EMPLOYEE'S PRINCIPAL PLACE OF EMPLOYMENT WILL GOVERN ALLOCATION.
5. TERMINATION NOTIFICATION: YOU MUST PROMPTLY NOTIFY THE PAYEE WHEN THE EMPLOYEE/OBLIGOR NO LONGER WORKS FOR YOU. PLEASE PROVIDE THE INFORMATION REQUESTED AND RETURN A COPY OF THIS ORDER/NOTICE TO THE AGENCY IDENTIFIED BELOW.
 DATE OF SEPERATION _____
 LAST KNOWN HOME ADDRESS _____
 NEW EMPLOYER'S ADDRESS _____
6. LUMP SUM PAYMENTS: YOU MAY BE REQUIRED TO REPORT AND WITHHOLD FROM LUMP SUM PAYMENTS SUCH AS BONUSES, COMMISSIONS, OR SEVERANCE PAY. IF YOU HAVE ANY QUESTIONS ABOUT LUMP SUM PAYMENTS, CONTACT THE PERSON OF AUTHORITY BELOW.
7. LIABILITY: IF YOU FAIL TO WITHHOLD INCOME AS THE ORDER/NOTICE DIRECTS, YOU ARE LIABLE FOR BOTH THE ACCUMULATED AMOUNT YOU SHOULD HAVE WITHHELD FROM THE EMPLOYEE/OBLIGOR'S INCOME AND ANY OTHER PENALTIES SET BY STATE LAW.

32

FIG. 19B
(PRIOR ART)

1900

8. ANTI-DISCRIMINATION: YOU ARE SUBJECT TO A FINE DETERMINED UNDER STATE LAW FOR DISCHARGEING AN EMPLOYEE/ OBLIGOR FROM EMPLOYMENT, REFUSING TO EMPLOYEE, OR TAKING DISCIPLINARY ACTION AGAINST ANY EMPLOYEE/ OBLIGOR BECAUSE OF A CHILD SUPPORT WITHHOLDING.

33

9. WITHHOLDING LIMITS: YOU MAY NOT WITHHOLD MORE THAN THE LESSER OF: 1) THE AMOUNT ALLOWED BY THE FEDERAL CONSUMER CREDIT PROTECTION ACT (15 U.S.C. § 1673 (b)); OR 2) THE AMOUNTS ALLOWED BY STATE OF THE EMPLOYEE'S/ OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT. THE FEDERAL LIMIT APPLIES TO THE AGGREGATE DISPOSABLE WEEKLY EARNINGS (ADWE). ADWE IS THE NET INCOME LEFT AFTER MAKING MANDATORY DEDUCTIONS SUCH AS: STATE, FEDERAL, LOCAL TAXES; SOCIAL SECURITY TAXES; AND MEDICARE TAXES. THE FEDERAL CCPA LIMIT IS 50% OF THE ADWE FOR CHILD SUPPORT AND ALIMONY, WHICH IS INCREASED BY : 1) 10% IF THE EMPLOYEE DOES NOT SUPPORT A SECOND FAMILY; AND/OR 2) 5% IF ARREARS ARE MORE THAN 12 WEEKS OLD, (SEE BOXES ON FRONT)

10. 34

REQUESTING AGENCY 35a

35b

35c

35d

35e

IF YOU OR YOUR EMPLOYEE/OBLIGOR HAVE ANY QUESTIONS, CONTACT:

36a

36b

BY TELEPHONE AT 36c OR

BY FAX AT 36d

FIG. 19B (CONT)
(PRIOR ART)

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#	CONTENTS
1a	NAME OF YOUR STATE.
1b	NAME OF YOUR JURISDICTION.
2	DATE THE ORDER/NOTICE TO WITHHOLD IS TO BE MAILED.
3	IDENTIFYING NUMBER USED BY THE COURT/AGENCY ISSUING THIS ORDER/NOTICE, IF APPROPRIATE.
4a-b	CHECK THE APPROPRIATE CASE STATUS OF THE ORDER/NOTICE TO WITHHOLD.
5	EMPLOYER/WITHOLDER'S NINE DIGIT FEDERAL EMPLOYER IDENTIFICATION NUMBER (IF AVAILABLE). INCLUDE THREE DIGIT LOCATION CODE (IF KNOWN).
6a	EMPLOYER/WITHOLDER'S NAME.
6b-e	EMPLOYER/WITHOLDER'S MAILING ADDRESS. (THIS MAY DIFFER FROM THE EMPLOYEE/OBLIGOR WORK SITE.)
7	EMPLOYEE/OBLIGOR'S LAST NAME, FIRST NAME, AND MIDDLE INITIAL (IF KNOWN).
8	EMPLOYEE/OBLIGOR'S SOCIAL SECURITY NUMBER.
9	CASE IDENTIFIER (OR OTHER IDENTIFIER) USED FOR RECORDING THE PAYMENT. (MAY BE THE SAME AS #3).
10	CUSTODIAL PARENT'S LAST NAME, FIRST NAME, AND MIDDLE INITIAL (IF KNOWN).
11	CHILD(REN)'S NAME(S) AND DATE OF BIRTH LISTED IN THE SUPPORT ORDER.
12	NAME OF STATE THAT ISSUED THE UNDERLYING CHILD SUPPORT ORDER.
13	TERMINATION DATE OF THE SUPPORT ORDER.
14	CHECK IF THE CHILD SUPPORT ORDER REQUIRES ENROLLMENT OF THE CHILD(REN) IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT.

FIG. 19C
(PRIOR ART)

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15a	DOLLAR AMOUNT TO BE WITHHELD FOR PAYMENT OF CURRENT CHILD SUPPORT.
15b	TIME PERIOD THAT CORRESPONDS TO THE AMOUNT IN #15a (E.G., MONTH).
16a	DOLLAR AMOUNT TO BE WITHHELD FOR PAYMENT OF PAST-DUE CHILD SUPPORT UNDER YOUR STATE LAW.
16b	TIME PERIOD THAT CORRESPONDS TO THE AMOUNT IN #16a (E.G., MONTH).
17a	DOLLAR AMOUNT TO BE WITHHELD FOR PAYMENT OF MEDICAL SUPPORT, AS APPROPRIATE, BASED ON THE UNDERLYING ORDER.
19b	DESCRIBE THE AMOUNT(S) REPRESENTED IN #19a SEPARATELY BY FEE TYPE (E.G., COURT FEES).
20	ADDITIONAL SPACE PROVIDED FOR MISCELLANEOUS OBLIGATIONS, IF APPROPRIATE.
21a	TOTAL OF #15a, #16a, #17a, #18a, #19a, AND #20.
21b	TIME PERIOD THAT CORRESPONDS TO THE AMOUNT IN #15b (E.G., MONTH).
22a	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE IS PAID WEEKLY.
22b	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE IS PAID EVERY TWO WEEKS.
22c	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE IS PAID TWICE A MONTH.
22d	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE [IS PAID] ONCE A MONTH.

FIG. 19D
(PRIOR ART)

1900

23	NUMBER OF DAYS IN WHICH THE WITHHOLDING MUST BEGIN PURSUANT TO THE LAW OF YOUR STATE.
24	NUMBER OF WORKING DAYS AN EMPLOYER OR OTHER PAYOR OF INCOME MUST REMIT AMOUNTS WITHHELD PURSUANT TO THE LAW OF YOUR STATE.
25	AMOUNT OR PERCENTAGE THAT AN EMPLOYER OR OTHER PAYOR OF INCOME MAY DEDUCT IN ADDITION TO CHILD SUPPORT FROM ITS PAYMENT AS A FEE FOR WITHHOLDING CHILD SUPPORT PURSUANT TO THE LAW OF YOUR STATE. IF YOUR STATE DOES NOT PERMIT DEDUCTION OF A FEE, ENTER 0. EMPLOYERS WITH EMPLOYEES/OBLIGORS LOCATED IN ANOTHER STATE SHOULD KNOW THOSE STATE LAWS.
28a	CASE IDENTIFIER OR OTHER IDENTIFIER. (MAY BE THE SAME AS #3 AND/OR #9).
28b	FEDERAL INFORMATION PROCESS STANDARD (FIPS) CODE FOR TRANSMITTING PAYMENTS THROUGH EFT/EDI. THE FIPS CODE IS FIVE CHARACTERS THAT IDENTIFIES THE STATE AND COUNTY. IT IS SEVEN CHARACTERS WHEN IT IDENTIFIES THE STATE, COUNTY, AND A LOCATION WITHIN THE COUNTY. IT IS NECESSARY FOR CENTRALIZED COLLECTIONS. COMPLETE ONLY FOR EFT/EDI TRANSMISSION.
28c	RECEIVING AGENCY'S BANK ROUTING NUMBER. COMPLETE ONLY FOR EFT/EDI TRANSMISSION.
28d	RECEIVING AGENCY'S BANK ACCOUNT NUMBER. COMPLETE ONLY FOR EFT/EDI TRANSMISSION.

FIG. 19E
(PRIOR ART)

U.S. Patent

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29a	NAME OF THE CHILD SUPPORT ENFORCEMENT AGENCY TO WHICH PAYMENTS ARE MADE AND THE CASE IDENTIFIER ON THE PAYMENT LINE.
29b-e	STREET ADDRESS, CITY, AND STATE OF THE CHILD SUPPORT ENFORCEMENT AGENCY IDENTIFIED IN #29a.
30a	SIGNATURE OF OFFICIAL(S) AUTHORIZED TO SEND THE ORDER/NOTICE. THIS LINE IS OPTIONAL IF A SIGNATURE IS NOT REQUIRED BY STATE STATUTE.
30b	PRINT NAME OF THE OFFICIAL(S) AUTHORIZED TO SEND THE ORDER/NOTICE.
31	CHECK THE BOX IF THE EMPLOYER IS TO PROVIDE A COPY OF THE ORDER/NOTICE TO THE EMPLOYEE.
32	PENALTY AND YOUR STATE CITATION FOR AN EMPLOYER WHO FAILS TO COMPLY WITH THE ORDER/NOTICE. YOUR STATE LAW GOVERNS UNLESS THE OBLIGOR IS EMPLOYED IN ANOTHER STATE, IN WHICH CASE THE LAW OF THE STATE IN WHICH HE OR SHE IS EMPLOYED GOVERNS.
36d	FACSIMILE NUMBER FOR THE PERSON WHOSE NAME APPEARS IN #36a.

FIG. 19F
(PRIOR ART)

2000

#	l_1	l_2	l_2	• • •
1a	VA	TX	VA	
1b	ANYTOWN	SOMETOWN	ANYTOWN	
2	6/12/98	7/1/98	6/21/98	
3	98-123	98-456	98-789	
⋮				
6a	Y CORP.	X CORP.	Y CORP.	
⋮				
36d				

1254

FIG. 20

2100

RECIPIENT	1a	1b	2	3	• • •	36d
Y CORP.	VA	ANYTOWN	6/12/98	98-123		
Y CORP.	VA	ANYTOWN	7/4/98	98-761		
X CORP.	TX	SOMETOWN	7/1/98	98-456		
• • •						

1255

FIG. 21

2200

RECIPIENT	FTP	INTERNET	TAPE	DISKETTE	• • •	n
X CORP.	Y	X	X	Y		
Y CORP.	X	X	Y	X		

1257

FIG. 22

2300

RECIPIENT	1a	1b	2	3	• • •	36d
Y CORP.	VA	ANYTOWN	6/12/98	98-123		
Y CORP.	VA	ANYTOWN	7/4/98	98-761		

910

FIG. 23

2400

RECIPIENT	1a	1b	2	3	• • •	36d
Y CORP.	VA	ANYTOWN	6/12/98	98-123		
Y CORP.	VA	ANYTOWN	7/4/98	98-761		

1352

FIG. 24

2500

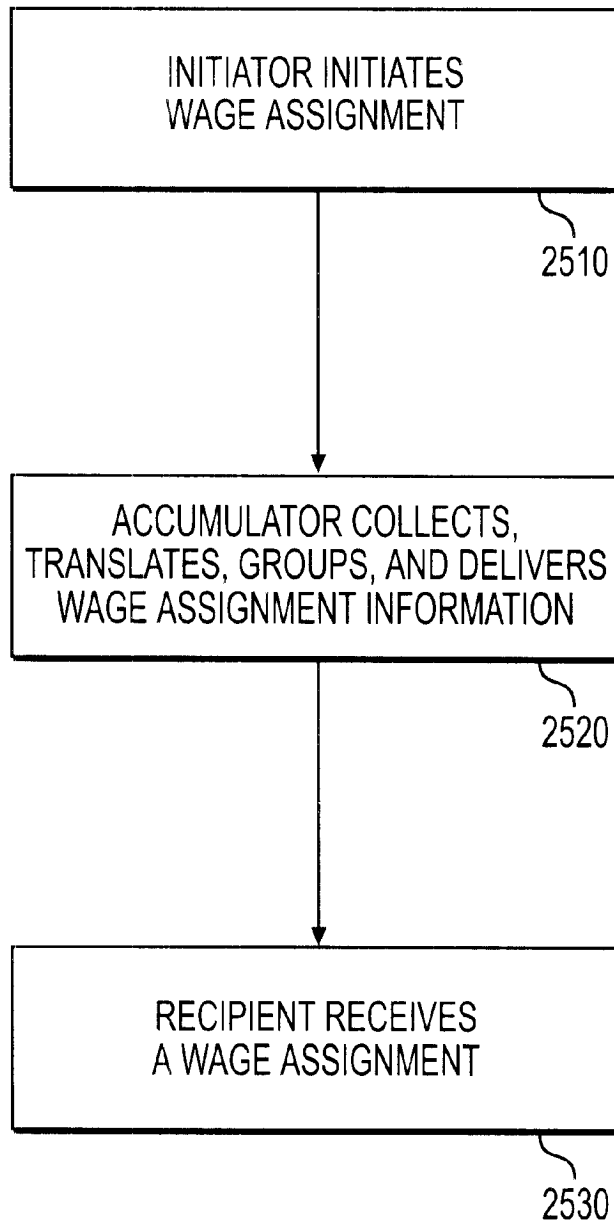


FIG. 25

2600

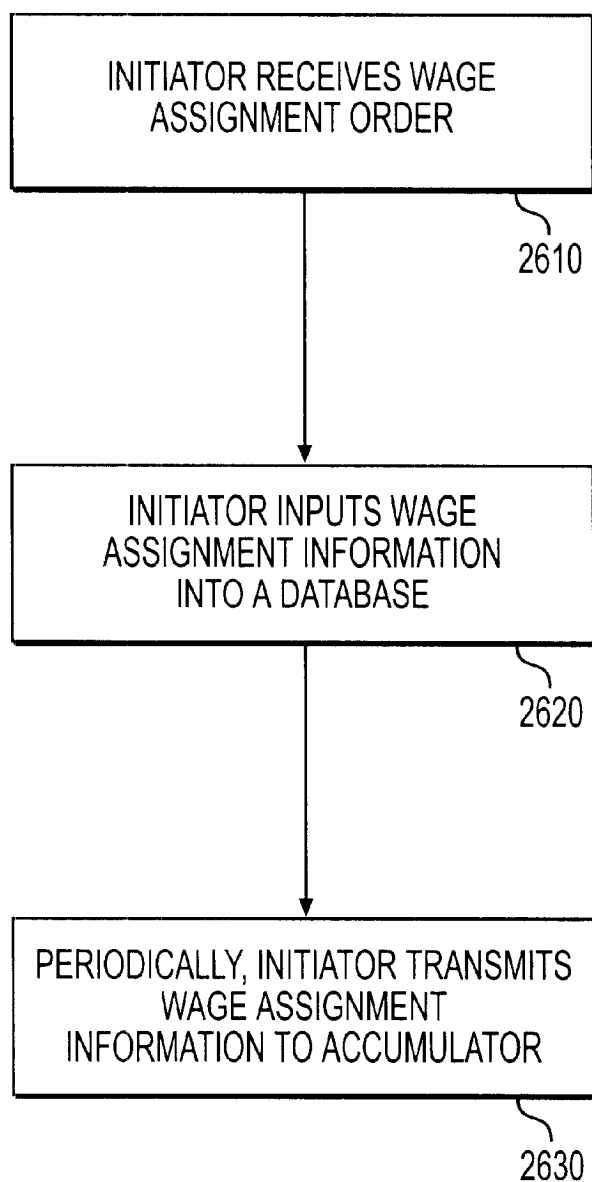


FIG. 26

2700

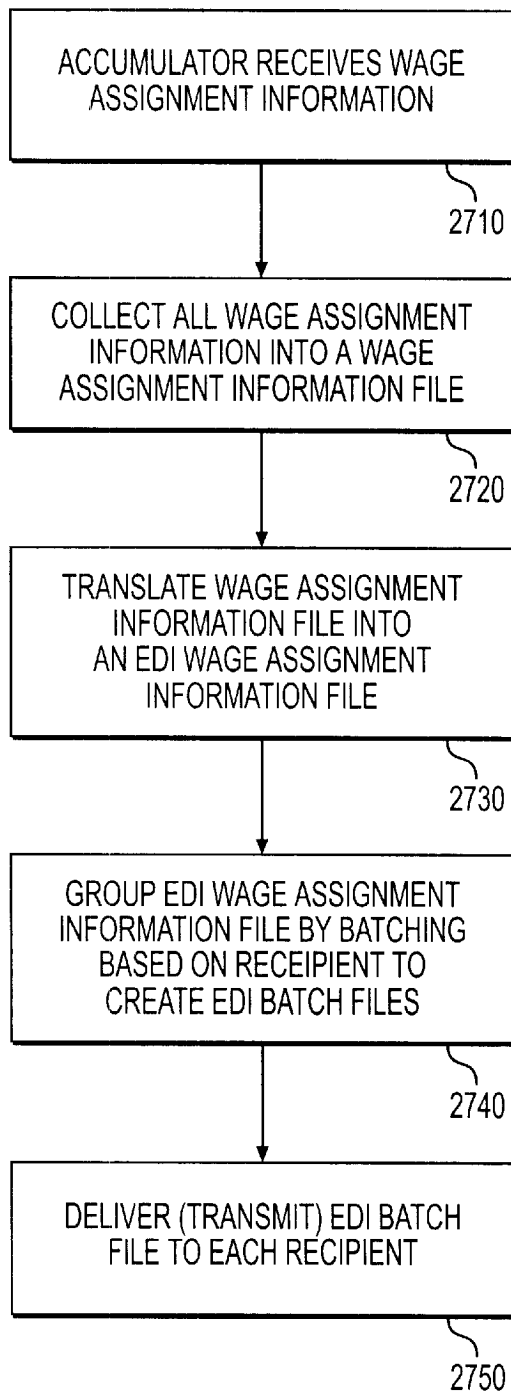


FIG. 27

2800

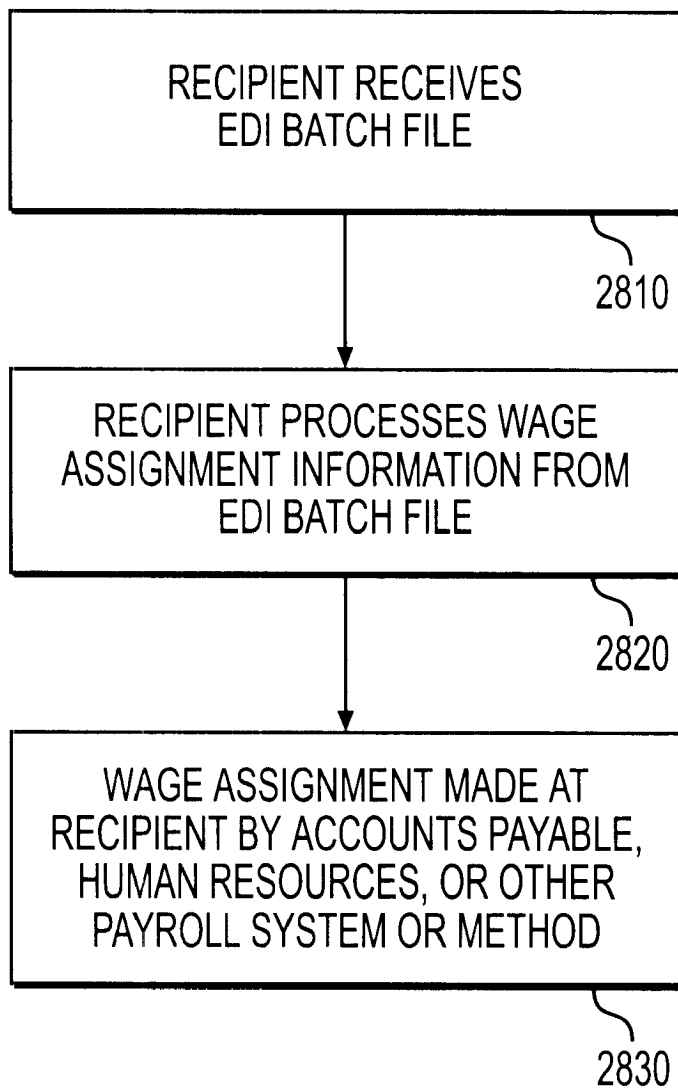


FIG. 28

2900

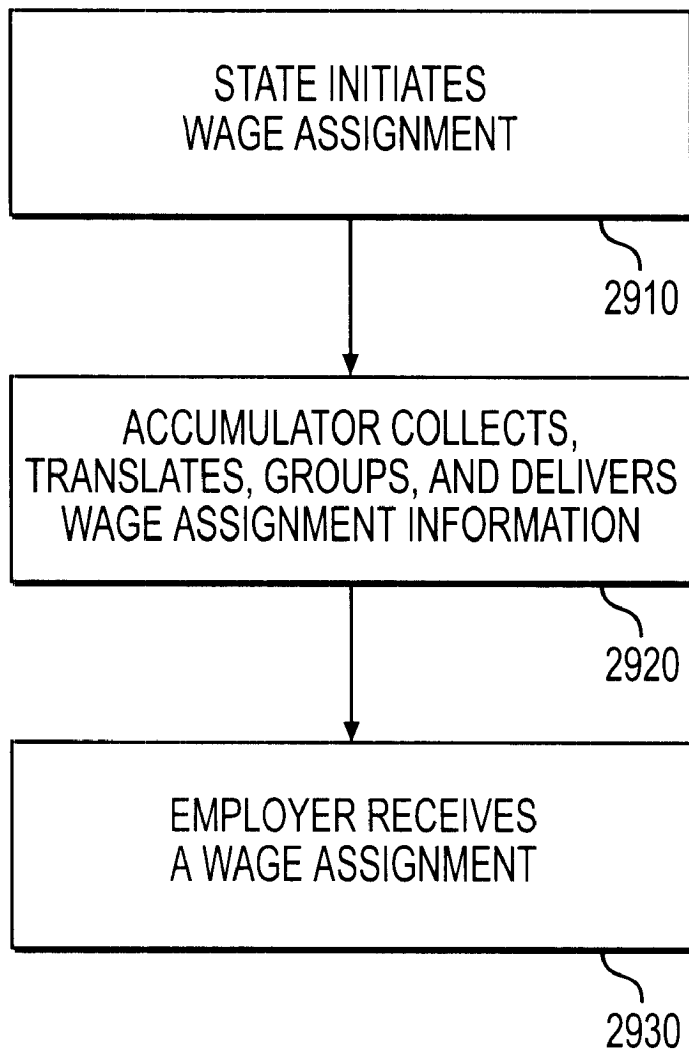


FIG. 29

3000

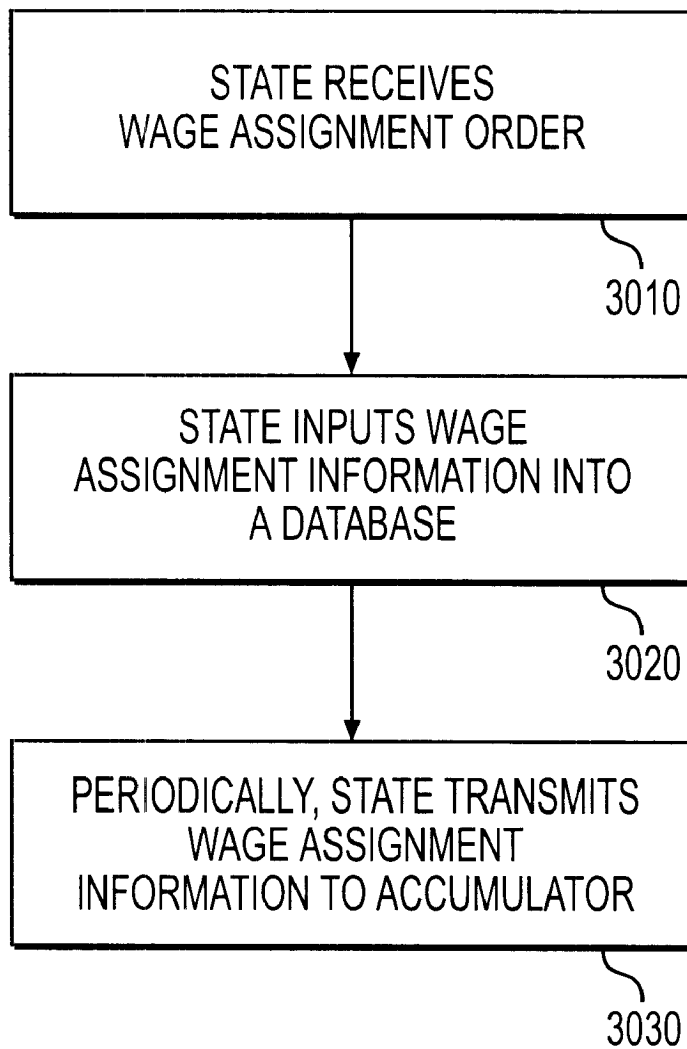


FIG. 30

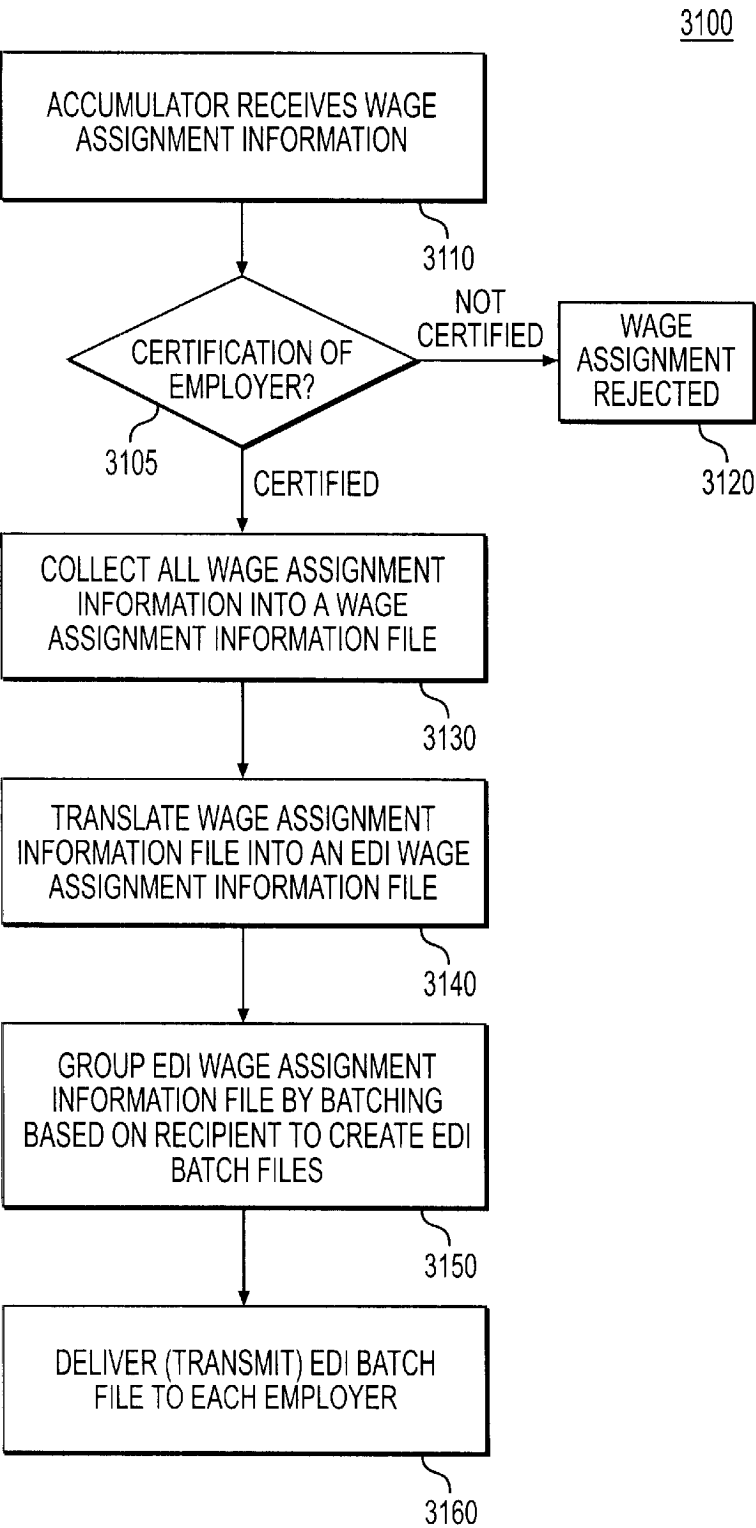


FIG. 31

3200

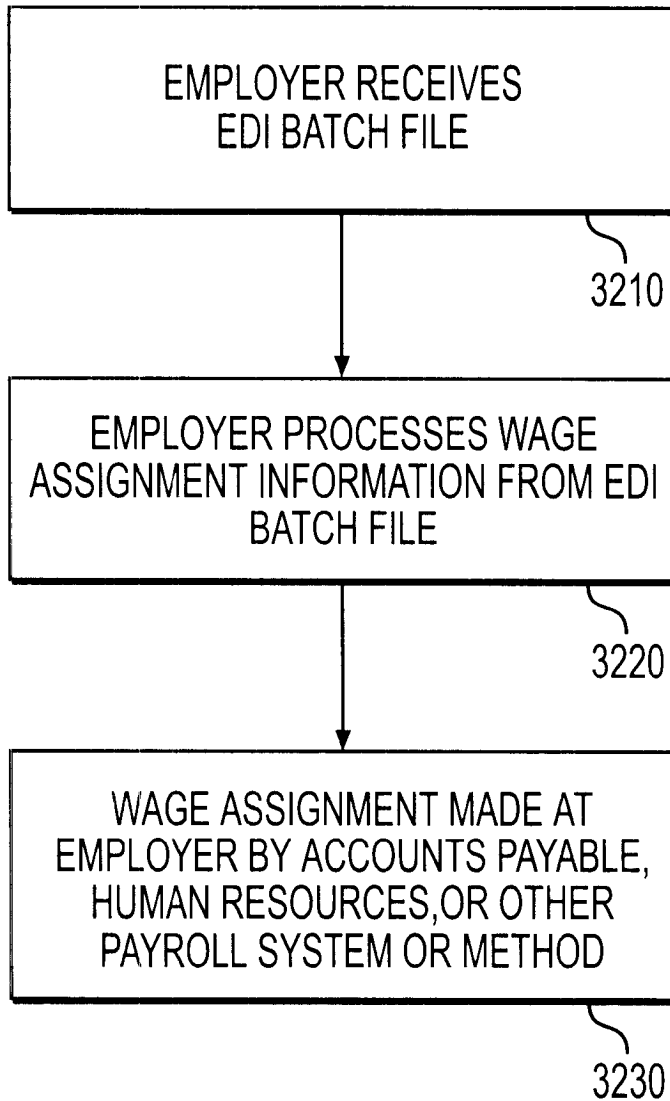


FIG. 32

US 6,567,821 B1

1

METHOD AND APPARATUS FOR ELECTRONIC COLLECTION, TRANSLATION, GROUPING AND DELIVERY OF WAGE ASSIGNMENT INFORMATION

RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application No. 60/085,731, filed May 15, 1998.

BACKGROUND OF THE INVENTION

A. Field of the Invention

The present invention relates generally to the collection, translation, grouping, and delivery of wage assignment information. More particularly, the invention relates to methods and apparatus for electronic collection of wage assignment information, translation of the information into an electronic wage assignment format, grouping of the formatted information into files by batching for each respective recipient, and electronic delivery of the batched information files to each respective recipient.

B. Description of the Related Art

If a private or public entity wishes to collect a financial obligation from a particular person, the entity may obtain a judicial order requiring that the person make payments to satisfy the obligation. Frequently, the most common method to satisfy a court-ordered or court-enforced financial obligation is by requiring that the employer withhold a portion of the person's salary in the form of a wage assignment. A wage assignment may be implemented either by manual or electronic means. Manual implementation is the least efficient manner to process a wage assignment. Furthermore, even electronic implementation includes significant temporal and structural inefficiencies, primarily with regard to the collection, translation, grouping, and delivery of the information.

Electronic Implementation of Wage Assignments. Electronic commerce (EC) describes the paperless exchange of business information using electronic data interchange (EDI), electronic funds transfer (EFT), and other means of electronic communication. Of these various types of electronic communication, EDI allows for the accumulation, processing, transmittal, and receipt of business-related information that was once dependent on paper transactions. Generally, EDI describes the computer-to-computer exchange of business information using a public standard. The first such public EDI standard was created by the Transportation Data Coordinating Committee (TDCC), which created the first set of industry EDI standards comprising forty-five transaction sets for the transportation industry. These initial EDI transaction sets provided for the exchange of business information pertaining to ocean, motor, air, and rail carriers and the associated shippers, brokers, customs, freight forwarders, and bankers. Eventually, other business segments soon discovered that EDI was a more cost effective means of communicating business transaction information than paper transactions.

For the computer-to-computer exchange of business transaction information through EDI, however, a standard format is required for reasons of compatibility. Initially, the TDCC standards controlled, but these standards were limited to business transactions in the transportation industry. As the use of EDI expanded, there was a need for a new, broader standard. In response, the American National Standards Institute (ANSI) was tasked with the responsibility of creating a new standard, a standard that would include

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transaction sets for all types of business information. Yet, while ANSI is the coordinator and clearing house for national standards in the United States, ANSI does not write national standards. Instead, ANSI charters organizations, called Accredited Standards Committees (ASCs), to prepare consensus standards. ASCs are composed of voluntary representatives from industry, labor, consumer, and government. Periodically, ANSI charters an ASC to develop a new standard.

One such ASC, the ASC X12, was chartered by ANSI to develop standards for the structure, format, and content of electronic business transactions conducted through EDI. The ASC X12 is administered by the Data Interchange Standards Associations, Inc. (DISA), a not-for-profit corporation. Under the management of DISA, the ASC X12 composed and issued the ANSI X12 standard (i.e., the X12 standard). Pursuant to the X12 standard, each EDI transaction involves the electronic transmission of a business document using a particular transaction set. Thus, the transaction sets (or record sets) in the X12 standard define both the file structure and content format for communicating electronic business transactions using EDI.

Under the X12 standard, there are a number of particular record sets, each set corresponding to a particular type of business transaction. As of 1994, the X12 standard included 187 record sets. Notably, the various record sets of the X12 standard are delineated by specific numeric codes. For example, record set 135 pertains to student loan applications, and record set 813 pertains to electronic tax filing. For purposes of wage assignments, however, record set 521 is the most common type of transaction set, as record set 521 pertains to income or asset offset. Notably, the record set 521 is still under development. Nonetheless, when finally implemented, the 521 record set will make it possible to electronically communicate wage assignment information.

Therefore, under the X12 standard, there is an EDI transaction set for offsets from wages or other income (i.e., the 521 record set) that allows for offsets to wages or other income by means of an electronic implementation of a wage assignment. As described in the Draft Standard for Trial Use, 521 Income or Asset Offset, dated May 15, 1997, hereby incorporated by reference, the record set 521 allows for the input of both the wage transfer instruction as well as other pertinent information related to a wage assignment transaction. The wage transfer instruction and the other information relating to the wage transfer are referred to collectively as wage assignment information. With wage assignment information, an employer may be instructed to withhold automatically a predetermined portion of the wage of a particular employee and to transfer automatically the withheld portion to another person or entity. Thus, for the electronic implementation of a wage assignment, however, the wage assignment information must be collected from an initiating entity; the wage assignment information must then be translated into the proper electronic format; the wage assignment information must then be batched for each recipient; and the wage assignment information must then be delivered to each respective recipient. Furthermore, for this electronic implementation, the initiator of the wage assignment must be capable of sending the wage assignment information in a proper electronic format, and the recipient must be capable of receiving the wage assignment information in an electronic format and then implementing the wage assignment.

However, the present systems and methodologies for the electronic processing of wage assignment information are inefficient and undesirable. These shortcomings are demon-

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strated by the present systems and methodologies. For purposes of considering the present systems and methodologies for electronic implementation of wage assignment information, an illustration of one common type of wage assignment is used herein as an example, namely, a wage assignment based on a child support obligation. With the present systems and methodologies, pursuant to an order by a judicial entity, a state entity generates a wage assignment order for a noncustodial parent to make child support payments to a custodial parent. In almost all cases, the state entity mails the order to the employer of the noncustodial parent. The employer of the noncustodial parent must then process the wage assignment information, so that a withheld wage portion is automatically removed from the wage of the noncustodial parent. Notably, for purposes of the present systems and methodologies, as set forth below, virtually any type of wage assignment would be similarly treated as in the example of a wage assignment based on a child support obligation.

Collection of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support obligation, a particular state entity is generally responsible for generating the wage assignment orders for every noncustodial parent subject to a wage assignment. In processing the orders, the state entity generally sends a wage assignment order to the indicated employer of each noncustodial parent. Thus, large employers generally receive multiple wage assignment orders. Moreover, in most cases, employers not only receive multiple wage assignment orders from a state entity, but employers also receive multiple wage assignment orders from multiple state entities. This current system is inefficient and undesirable. According to the present systems and methodologies, there is no means to collect the wage assignment orders and transmit the orders as a single unit to the employers, which would allow for the translation of the orders into an EDI format, batching of the files for each recipient, and delivery as a single EDI transaction. Thus, the present systems and methodologies for collecting wage assignment information are inadequate.

Translation of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support obligation, the X12 standard provides a mechanism for automating the allocation of wage assignment orders for child support payments to employers. Because the X12 standard includes a transaction set for wage assignments (i.e., the 521 record set), EDI may be used to process wage assignments electronically. However, in most states, wage assignment orders are still issued on paper. Thus, in these states, wage assignments cannot be implemented electronically. Further, in the remaining states that may use electronic wage assignments, while the wage assignment orders may be electronically generated, the orders are not issued in a format compatible with the X12 standard. Thus, a wage assignment order cannot be processed as an EDI transaction. As such, the present systems and methodologies are inefficient and undesirable. Therefore, according to the present systems and methodologies, there is no means to translate either the paper or the electronic information produced by the state agencies into a format compatible with the X12 standard that may then be batched delivered as an EDI file to employers. Thus, the present systems and methodologies of translating wage assignment information are inadequate.

Grouping of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support obligation, separate wage assignment orders are issued for each wage assignment. Thus, as noted above, an employer may not only receive numerous wage assignment orders but

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may also receive numerous wage assignment orders from numerous state entities. Such inefficiencies strain the resources of employers that must adhere to both judicial and governmental requirements regarding the processing of wage assignments. The X12 standard provides a means to avoid these inefficiencies by the use of EDI. Using the fields of a record set from the X12 standard, such as, for example, the 521 record set, wage assignment orders could be collected, translated and then batched for delivery to employers as a single EDI file. However, the present systems and methodologies do not provide a means of grouping wage assignment orders by recipient, where the orders are also collected, translated, and delivered in a wage assignment collection and delivery system. Thus, the present systems and methodologies of grouping wage assignment information are inadequate.

Delivery of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support obligation, an employer implements the wage assignment upon receipt of the wage assignment order. However, if the wage assignment order has been converted into an electronic format, the wage assignment information must be transmitted to the employer in a useable manner. Some employers are capable of receiving files electronically, but most employers are not equipped with this capability. Without these capabilities, an employer cannot receive wage assignment information electronically and automatically implement processing of the wage assignment. As such, the present systems and methodologies are inefficient and undesirable. According to the present systems and methods, there is no means to deliver wage assignment information to employers based on particular delivery requirements, where the information is initially collected from a state entity, translated into an electronic format, and then grouped for each recipient. Thus, the present systems and methodologies of delivering wage assignment information are inadequate.

Electronic Implementation of Wage Assignment Information. For the reasons described above, systems and methods would be desirable that could collect wage assignment information, translate the wage assignment information into an EDI file compatible with the X12 standard, group the information by recipient, and then deliver a single EDI file to the each respective recipient. For a typical wage assignment, such as, for example, a child support obligation, such a system and method would allow for the collection of wage assignment orders for child support payments from state entities and, once collected, translate the wage assignment orders into an EDI file compatible with the X12 standard (e.g., the 521 record set), and then group the orders by recipient, and finally deliver a single EDI file to each respective recipient for processing. However, as described above, the current systems and methodologies reflect an unsatisfactory development of systems and methods to collect, translate, group, and deliver wage assignment information from an initiator of a wage assignment to a recipient. Of course, once the recipient obtains the wage assignment, the processing and implementation of the payment and disbursement occur using any known system or method.

For information on systems and methods for payment and disbursement processing generally, and for payment processing using debit-based EFT as well as for disbursement processing using addendum-based EDI specifically, see U.S. Pat. No. 5,946,669 of John POLK, entitled "Method and Apparatus for Payment Processing Using Debit-based Electronic Funds Transfer and Disbursement Processing Using Addendum-based Electronic Data Interchange," filed Sep. 30, 1997 and issued Aug. 31, 1999, incorporated herein by

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reference. U.S. Pat. No. 5,946,669 provides efficient apparatus and methods for processing payments and disbursements, including wage assignments. However, U.S. Pat. No. 5,946,669 does not provide a particular apparatus or method, whereby wage assignment information may be collected, translated, grouped, and delivered from an initiator to a recipient.

SUMMARY OF THE INVENTION

It is an object of an invention to provide a system for the collection, translation, grouping, and delivery of wage assignment information from an initiator to a recipient via an accumulator.

It is another object of an invention to provide a system for the receipt of wage assignment information at an initiator.

It is still another object of an invention to provide a system for the collection of wage assignment information at an accumulator from an initiator.

It is yet another object of an invention to provide a system whereby an accumulator may translate wage assignment information into an electronic wage assignment format.

It is also an object of an invention to provide a system whereby an accumulator may group electronic wage assignment information by batching the files for each respective recipient.

It is furthermore an object of an invention to provide a system whereby an accumulator may deliver the batched wage assignment information files to each respective recipient.

It is additionally an object of an invention to provide a system whereby a recipient may process wage assignments based on information received in a batched wage assignment information file.

To attain these and other objects, and in accordance with the purposes of the invention, as embodied and broadly described herein, one aspect of the invention includes a method consistent with the present invention that includes the steps, performed by a processor, of receiving a wage assignment at an initiator; dispatching the wage assignment from the initiator to an accumulator; processing the wage assignment at the accumulator; transmitting the wage assignment from the accumulator to a recipient; and implementing the wage assignment at the recipient.

In another aspect, the invention includes a method of processing a wage assignment at an initiator, comprising the steps, performed by a processor, of receiving a wage assignment; inputting the wage assignment into a database; and transmitting the wage assignment to an accumulator.

In yet another aspect, the invention includes a method of processing wage assignments at an accumulator, comprising the steps, performed by a processor, of collecting a plurality of wage assignments from a plurality of initiators; translating the wage assignments into files with a standard wage assignment format, the format including data in at least one data field; grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format; and delivering a batch file to each of a plurality of recipients.

In still another aspect, the invention includes a method of processing a wage assignment at a recipient, comprising the steps, performed by a processor, of receiving a wage assignment from an accumulator; processing the wage assignment; and implementing the wage assignment against a wage of an employee.

Additional aspects of the invention are disclosed and defined by the appended claims. It is to be understood that

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both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings are included to provide a further understanding of the invention, are incorporated in and constitute a part of this specification, illustrate preferred embodiments of the invention, and, together with the description, serve to explain the principles of the invention.

In the drawings,

FIG. 1 is a block diagram of a wage assignment collection and delivery system;

FIG. 2A is a block diagram of an alternative wage assignment collection and delivery system;

FIG. 2B is a block diagram of another alternative wage assignment collection and delivery system;

FIG. 3 is a flow diagram of a method for processing wage assignment information in a wage assignment collection and delivery system, as shown in FIG. 1;

FIG. 4 is a block diagram of an initiator, as shown in FIG. 1;

FIG. 5 is a block diagram of an accumulator, as shown in FIG. 1;

FIG. 6 is a block diagram of the processing performed during collection by an accumulator, as shown in FIG. 5;

FIG. 7 is a block diagram of the processing performed during translation by an accumulator, as shown in FIG. 5;

FIG. 8 is a block diagram of the processing performed during grouping by an accumulator, as shown in FIG. 5;

FIG. 9 is a block diagram of the processing performed during delivery by an accumulator, as shown in FIG. 5;

FIG. 10 is a block diagram of a recipient, as shown in FIG. 1;

FIG. 11 is a block diagram of a data processor at an initiator, as shown in FIG. 4;

FIG. 12 is a block diagram of a data processor at an accumulator, as shown in FIG. 5;

FIG. 13 is a block diagram of a data processor at a recipient, as shown in FIG. 10;

FIGS. 14A–14B depict a sample of an order/notice to withhold income for child support, as may be used by a wage assignment collection and delivery system, such as the system shown in FIG. 1;

FIGS. 15A–15B depict a sample of an order/notice to withhold income for child support containing data for purposes of illustration, as may be used by a wage assignment collection and delivery system, such as the system shown in FIG. 1;

FIG. 16 is a sample of the contents of the wage assignment information database in the data processor at the initiator shown in FIG. 11, using the illustrative data from FIGS. 15A–15B;

FIG. 17 is a sample of the contents of the wage assignment information database in the data processor at the accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B;

FIG. 18 is a sample of the contents of the wage assignment information file database in the data processor at the accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B as well as other illustrative data;

FIGS. 19A–19B depict a sample of an order/notice to withhold income for child support containing field identifi-

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ers for purposes of illustrating mapping rules; FIGS. 19C–19F are samples of mapping rules corresponding to FIGS. 19A–19B, such as mapping rules that would appear in the mapping rules database in the data processor at the accumulator shown in FIG. 12;

FIG. 20 is a sample of the contents of the EDI wage assignment information file database in the data processor at the accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B as well as other illustrative data;

FIG. 21 is a sample of the contents of the EDI batch file database in the data processor at the accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B as well as other illustrative data;

FIG. 22 is a sample of the contents of the recipient delivery database in the data processor at the accumulator shown in FIG. 12, containing data corresponding to illustrative parameters for an exemplary recipient delivery database;

FIG. 23 is a sample of the contents of a single EDI file from the EDI batch file database corresponding to a single recipient from the recipient delivery database in the data processor at the accumulator shown in FIG. 12, containing illustrative data for delivery to an illustrative recipient;

FIG. 24 is a sample of the contents of the EDI file database in the data processor at the recipient shown in FIG. 13, containing illustrative data for a single illustrative recipient;

FIG. 25 is a flow diagram of a method for processing wage assignment information in a wage assignment collection and delivery system, in accordance with one embodiment of the invention, as shown in FIG. 1;

FIG. 26 is a flow diagram of a method for processing wage assignment information at an initiator, in accordance with one embodiment of the invention, as shown in FIG. 25;

FIG. 27 is a flow diagram of a method for processing wage assignment information at an accumulator, in accordance with one embodiment of the invention, as shown in FIG. 25;

FIG. 28 is a flow diagram of a method for processing wage assignment information at a recipient, in accordance with one embodiment of the invention, as shown in FIG. 25;

FIG. 29 is a flow diagram of a method for processing wage assignment information in a wage assignment collection and delivery system, in accordance with an alternative embodiment of the invention, as shown in FIG. 2B;

FIG. 30 is a flow diagram of a method for processing wage assignment information at an initiator, in accordance with an alternative embodiment of the invention, as shown in FIG. 29;

FIG. 31 is a flow diagram of a method for processing wage assignment information at an accumulator, in accordance with an alternative embodiment of the invention, as shown in FIG. 29;

FIG. 32 is a flow diagram of a method for processing wage assignment information at a recipient, in accordance with an alternative embodiment of the invention, as shown in FIG. 29.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred embodiment of this invention, known as NEWS™ (National Employer Wage Withholding Service), is presently marketed by Lockheed Martin IMS, now ACS State & Local Solutions, Inc. The scope of the

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present invention, however, encompasses modifications and variations as described by the methods and apparatus described herein or as contained within the scope of the listed claims and their equivalents.

A. Introduction

The system of a preferred embodiment of the invention avoids the inefficiencies and shortcomings of the present wage assignment systems and methodologies by providing for the electronic collection, translation, grouping, and delivery of wage assignment information. Systems consistent with the present invention include receiving wage assignment information at an initiator regarding a wage assignment. The initiator gathers the wage assignment information and transmits the information to an accumulator. The accumulator collects the wage assignment information and then translates the information into an electronic format, such as an electronic file that corresponds to the public EDI standard established by the X12 standard. After translation, the accumulator then batches the electronic files based on a field in the electronic format. The accumulator then delivers a single batch file to each recipient. Upon receipt of a batch file, a recipient then processes the wage assignment and implements a funds or asset transfer in any known manner.

A preferred system consistent with the invention comprises several components, including a plurality of initiators, an accumulator, and a plurality of recipients. Each initiator receives and processes wage assignment information for various individuals. The initiators store and maintain the wage assignment information in a database and periodically transmit the database to an accumulator. The accumulator serves as a processing station (also known as a Value Added Network, or VAN) between the plurality of initiators and the plurality of recipients. In particular, the accumulator collects wage assignment information from each of the plurality of initiators and ensures that the information from each initiator is valid. The accumulator then translates the wage assignment information into a standard format, for example, into an EDI file, such as the 521 record set. The accumulator then batches the EDI files according to the recipient indicated in the EDI file and delivers a single EDI file to each of the plurality of recipients. The recipient processes and implements the wage assignment through any of several known methods. For an example of the implementation of a wage assignment, refer to U.S. Pat. No. 5,946,669.

B. System

FIG. 1 shows a wage assignment collection and delivery system according to one embodiment of the present invention. System 100 includes a plurality of initiators 110_{1-n}, an accumulator 120, and a plurality of recipients 130_{1-m}. Initiators 110_{1-n} may represent any entity that initiates a wage assignment. Accumulator 120 is the processing station that receives wage assignments from initiator 110_{1-n}, processes the wage assignments, and then transmits the wage assignments to recipients 130_{1-m}. Recipients 130_{1-m} entail those entities that receive and implement wage assignments.

FIG. 2A shows a wage assignment collection and delivery system according to an alternative embodiment of the present invention. System 200 includes a plurality of agencies 210_{1-m}, an accumulator 220, and a plurality of employers 230_{1-m}. In this embodiment, the plurality of agencies 101_{1-n} are agencies that may initiate a wage assignment, and the plurality of employers 230_{1-m} are the employers that may receive and implement wage assignments. Similar to FIG. 1, accumulator 120 in FIG. 2A is the processing station

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that receives wage assignments from agencies **210_{1-n}**, processes the wage assignments, and then transmits the wage assignments to employers **230_{1-m}**.

FIG. 2B shows a wage assignment collection and delivery system according to another alternative embodiment of the present invention. System **205** includes a plurality of states **215_{1-n}**, accumulator **220**, and a plurality of employers **235_{1-m}**. In this embodiment, the plurality of states **215_{1-n}** are states or state entities that may initiate a wage assignment, and the plurality of employers **235_{1-m}** are the employers that may receive and implement wage assignments. Similar to FIG. 1 and FIG. 2A, accumulator **120** in FIG. 2B is the processing station that receives wage assignments from states **215_{1-n}**, processes the wage assignments, and then transmits the wage assignments to employees **235_{1-m}**. In a preferred embodiment of the system shown in FIG. 2B, the plurality of states **215_{1-n}** are state agencies that initiate Child Support Orders requiring wage assignments for noncustodial parents, and the plurality of employers **235_{1-m}** are the employers of the noncustodial parents subject to the wage assignments pursuant to the Child Support Orders.

C. Process

FIG. 3 is a flow chart **300** illustrating the operation of a system **100** as shown in FIG. 1. As shown in FIG. 3, each initiator **110** inputs wage assignment information containing a wage assignment into a database that each initiator maintains separately (step **310**). After the wage assignment information is input into the database, each initiator **110** transmits, such as, in a periodic batch of ASCII files, the wage assignment information stored in the database to accumulator **120** (step **320**). Accumulator **120** then collects all the wage assignment information from all initiators **110** (step **325**). Accumulator **120** next translates the wage assignment information into an electronic format, which preferably comprises an EDI file using the 521 record set (step **330**). After accumulator **120** creates the EDI files, they are initially organized based on the initiator. After the translation, however, accumulator **120** reorganizes the wage assignment files based on one of the data fields, such as, for example, element BPR10 of the 521 record set, which indicates the company initiating the funds transfer (i.e., employer). During this grouping (or batching), a batch of EDI files are created, preferably so that each EDI file is batched based on the employer (step **340**). Accumulator **120** then delivers the batched EDI files to each of the plurality of recipients **130** (step **350**). The delivery medium that accumulator **120** uses to deliver the batched EDI files to each of the plurality of recipients **130** depends on the capability of each recipient. For example, accumulator **120** may transmit an EDI file electronically to the most sophisticated recipients **130**, while other recipients **130** may access a web page bulletin board (not shown) that is maintained by accumulator **120**, while still other recipients **130** may receive the files via facsimile, and while still other recipients **130** may receive their files by mail. Whatever the delivery means, once received, each of the plurality of recipients **130** then processes the wage assignment and initiates a funds transfer through any known manner (step **360**). Notably, a detailed description of the methods of operation of systems consistent with the operation of this system are provided in FIGS. 25-32.

D. Components

FIG. 4 illustrates one representative embodiment of an initiator **110** shown in FIG. 1. As shown in FIG. 4, initiator

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110 includes input station **405**, data processor **410**, and transmission means **420**. Input station **405** provides for the input of wage assignments into a database at initiator **110**. Input station **405** may include either manual or electronic means for inputting wage assignments into a wage assignment information database. Input station **405** may also include an optical character reader (OCR). Data processor **410** contains the database created by input station **405**. Similarly, data processor **410** provides for the periodic transmission of the contents of the wage assignment information database to accumulator **120** via transmission means **420**. Although data processor **410** preferably transmits the contents of the database electronically, initiator **110** may also transmit the database by other means, including by manual means. Thus, transmission means **420** includes both electronic and non-electronic means by transmission. A detailed description of data processor **410** is provided in FIG. 11.

FIG. 5 illustrates one representative embodiment of accumulator **120** shown in FIG. 1. As shown in FIG. 5, accumulator **120** includes data processor **505**, collection processing **510**, translation processing **520**, grouping processing **530**, and delivery processing **540**. After initiator **110** transmits a wage assignment to accumulator **120**, data processor **505** at accumulator **120** collects the wage assignment during collection processing **510**. Collection processing **510** includes the collection of a plurality of wage assignment information from a plurality of initiators **110**. Generally, the plurality of initiators **110** transmits a plurality of wage assignment information to accumulator **120** in the form of ASCII format. Thereafter, translation processing **520** converts the wage assignment information into a standardized electronic format such as, for example, an EDI file using the X12 standard. Grouping processing **530** then batches the EDI files based on one data field from the EDI file. Preferably, the data field on which the batching occurs is the data field for the recipient. In this manner, grouping processing **530** batches the EDI files based on the recipient. Delivery processing **540** then delivers a single EDI file to each of a plurality of recipients **130**. Notably, although delivery processing preferably occurs by electronic means, delivery processing **540** may take place by electronic, manual, or other means. Nonetheless, as noted above, in a preferred implementation, the EDI files are batched based on recipient, and therefore, delivery processing **540** dispatches a single EDI file from accumulator **120** to each of a plurality of recipients **130**. A detailed description of data processor **505** is provided in FIG. 12.

FIG. 6 illustrates one representative embodiment of collection processing **510** shown in FIG. 5. As shown in FIG. 6, collection processing **510** includes a plurality of wage assignment information **610_{1-n}** and wage assignment information file **620**. Wage assignment information **610_{1-n}**, which are shown in FIG. 6 as wage assignment information **610₁**, wage assignment information **610₂**, wage assignment information **610_n**, is representative of the plurality of wage assignments received from a plurality of initiators **110**. As shown in FIG. 6, the plurality of wage assignment information **610_{1-n}** are collected by accumulator **120** and placed in wage assignment information file **620**. Generally, the plurality of wage assignment information **610_{1-n}** are in the ASCII format. Wage assignment information file **620** is simply a database containing the plurality of wage assignment information **610_{1-n}**.

FIG. 7 illustrates one representative embodiment of translation processing **520** shown in FIG. 5. As shown in FIG. 7, translation processing **520** includes wage assignment information file **620**, map processing **710**, mapping rules **715**, and

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EDI wage assignment information file 720. In translation processing 520, as shown in FIG. 7, wage assignment information file 620 is subject to map processing 710. In map processing 710, mapping rules 715 are applied to the contents of wage assignment information file 620. In a preferred implementation, mapping rules 715 contain the mapping rules for the 521 record set of the X12 standard. Thus, in this preferred implementation, each wage assignment information in wage assignment information file 620 is translated into an EDI format pursuant to mapping rules 715 by map processing 710. Following map processing 710, each wage assignment information contained in wage assignment information file 620 has been translated into an electronic file, preferably an EDI file. These EDI files are then recorded in EDI wage assignment information file 720.

FIG. 8 illustrates one representative embodiment of grouping processing 530 shown in FIG. 5. As shown in FIG. 8, grouping processing 530 includes a plurality of wage assignment information as EDI files, including wage assignment information as EDI file (for Recipient₁) 810, wage assignment information as EDI file (for Recipient₂) 815, wage assignment information as EDI file (for Recipient₁) 820, and wage assignment information as EDI file (for Recipient_n) 825. Grouping processing 530 also includes batch processing 830, and a plurality of EDI batch files for recipients, including EDI batch file for Recipient₁ 840, EDI batch file for Recipient₂ 850, and EDI batch file for Recipient_n 860. FIG. 8 contains examples showing the operation of batch processing 830, which references both the plurality of wage assignment information as EDI files and the plurality of EDI batch files for recipients. These examples are based on references to Recipient₁ and Recipient₂ as well as Recipient_n.

As shown in FIG. 8, wage assignment information as EDI file (for Recipient₁) 810 and wage assignment information as EDI file (for Recipient₁) 820 are two EDI files for Recipient₁. Wage assignment information as EDI file (for Recipient₂) 815 is a single EDI file for Recipient₂. Wage assignment information as EDI file (for Recipient_n) 825 shows that an unlimited number of other EDI files may be available for an unlimited number of other recipients. During grouping processing 530, batch processing 830 batches the EDI files based on one data field from the EDI file. As described above, in a preferred implementation, batch processing 830 utilizes the recipient field from the EDI file (e.g., element BPR10 of the 521 record set) as the field for purposes of batch processing 830. FIG. 8 depicts batch processing based upon this preferred implementation. Thus, as shown in FIG. 8, EDI batch file for Recipient₁ 840 shows wage assignment information as EDI file (for Recipient₁) 810 and wage assignment information as EDI file (for Recipient₁) 820 as batched in a single EDI batch file for Recipient₁. Similarly, EDI batch file for Recipient₂ 850 contains wage assignment information as EDI file (for Recipient₂) 815 as a single batch file for Recipient₂. These examples for Recipient₁ and Recipient₂ would be implemented similarly for a plurality of other Recipients, such as, for example, Recipient_n. Thus, as shown in EDI batch file for Recipient₂ 860, wage assignment information as EDI file (for Recipient_n) 825 would be contained in a single batch file for Recipient_n.

FIG. 9 illustrates one representative embodiment of delivery processing 540 shown in FIG. 5. As shown in FIG. 9, delivery processing 540 includes wage assignment EDI batch file for Recipient_x 910, delivery 920, FTP 930, Internet 940, tape 950, diskette 960, and Recipient_x 970. Delivery processing 540 takes an EDI batch file containing wage

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assignment information for Recipient_x 910 and implements delivery 920. Delivery 920 entails the delivery of the EDI batch file to a recipient 130, i.e., Recipient_x 970. Delivery 920 may take place by one of several methods, such as, for example, FTP 930, Internet 940, a tape 950, and diskette 960. Other delivery methods are also available (not shown). Whatever method utilized by delivery 920, the wage assignment EDI batch file for Recipient_x 910 is delivered to Recipient_x 970. In a preferred implementation, delivery processing 540 contains a database indicating the preferred method of delivery for each of a plurality of recipients, such as, Recipient_x 970. A detailed description of the database indicating the preferred method of delivery is provided in FIG. 22.

FIG. 10 illustrates one representative embodiment of recipient 130 shown in FIG. 1. As shown in FIG. 10, recipient 130 includes transmission means 1005, data processor 1010, payroll department 1020, and wage assignment 1030. Recipient 130 receives wage assignment information from accumulator 120 via transmission means 1005. As described above, in a preferred implementation, transmission means 1005 receives an EDI file containing wage assignment information electronically. However, recipient 130 may also receive wage assignment information via transmission means 1005 in other forms, such as, for example, diskette. Whatever the form, once recipient 130 receives the wage assignment information, the wage assignment information is recorded in data processor 1010. Recipient 130 then processes the wage assignment in data processor 1010, which includes informing payroll department 1020 of the wage assignment. Note that payroll department 1020 may include any implementation of the wage assignment, manual or electronic. Payroll department 1020 then implements wage assignment 1030. In implementing wage assignment 1030, payroll department offsets or withholds a portion of the salary of the employee subject to the wage assignment. Such payment and disbursement processing may occur by any known system or method. A detailed description of data processor 1010 is provided at FIG. 13.

FIG. 11 illustrates one representative embodiment of data processor 410 shown in FIG. 4, in a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 11, data processor 410 at initiator 110 preferably includes one or more data processors 1100 equipped with conventional hardware and having operating software to support a central processing unit ("CPU") 1110, a random access memory ("RAM") 1120, a monitor 1130, an input/output (I/O) controller 1140, a data storage device (disk) 1150, an input device 1160, and an output device 1170. Although not depicted, processing station 300 is also capable of supporting peripheral equipment, such as, for example, scanners, printers, modems, etc., in conventional manners.

As shown in FIG. 11, CPU 1110 is directly coupled to each of RAM 1120, I/O controller 1140, and disk 1150. CPU 1110 operates by accessing RAM 1120 and disk 1150 in any conventional manner to execute program code (not shown) stored in at least one of RAM 1120 and disk 1150 to carry out the functions and acts described in connection with the operation of processing station 1100. CPU 1110 preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as the accumulation, processing, storage, and transmission of wage assignment information.

In one embodiment, processing station 1100 shown in FIG. 11 located at an initiator 110, such as, for example, a state child support department, operates to collect wage

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assignment information from persons, such as, for example, persons subject to mandatory child support payments. In such an example, a case worker at a state child support department inputs data at input device **1160** regarding a noncustodial parent who is subject to a Child Support Order. Data input at input device **1160** is received at CPU **1110** through I/O controller **1140** and stored in wage assignment information database **1152**, which is stored in disk **1150**. Preferably, processing station **1100** periodically transmits a batch of files through output device **1170** containing the wage assignment information stored in wage assignment information database **1152** to accumulator **120** as shown in FIG. 1. Although it is preferable to transmit the database as a batch of files, processing station **1100** could transmit the wage assignment information to accumulator **120** using other equivalent electronic means, such as E-mail, Internet bulletin boards, etc., or non-electronic means, such as Federal Express and the U.S. Postal Service. In the case of non-electronic means, processing station **1100** would either transmit a printout of the database or download the database onto a disk and transmit the disk to accumulator **120**. Once the non-electronic information arrived at accumulator **120**, the wage assignment information would then need to be manually input into the data processor at accumulator **120**.

As shown in FIG. 11, disc **1150** preferably comprises a large capacity memory capable of maintaining wage assignment information database **1152**. Wage assignment information database **1152** contains data corresponding to a wage assignment, such as, for example, a Child Support Order. Wage assignment information database **1152** can be structured in many forms and typically includes informational fields for the name of the originating state, the name of the originating jurisdiction, the date, and employer identification (which is normally the employer's Federal Tax Identification Number), the employer name, the employer address, the name of the custodial parent, the social security number of the non-custodial parent, the name of a custodial parent, the ordered termination date (which indicates when the child support is no longer mandatory), the dollar amount, etc. Data contained in wage assignment database **1152** may be periodically obtained and updated from input device **1160**. Samples of the records and the respective fields contained in wage assignment information database **1152** is shown in and described in connection with FIG. 16.

FIG. 12 illustrates one representative embodiment of data processor **505** shown in FIG. 5, in a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 12, accumulator **120** preferably includes one or more processing stations **1200**, which could be a conventional personal computer, mainframe, or equivalent, each equipped with conventional hardware and having operating software to support a central processing unit ("CPU") **1210**, a random access memory ("RAM") **1220**, a monitor **1230**, an input/output (I/O) controller **1240**, a data storage device (disk) **1250**, an input device **1260**, and an output device **1270**. Although not depicted, processing station **1200** is also capable of supporting peripheral equipment such as scanners, printers, modems, etc., in conventional manners.

As shown in FIG. 12, CPU **1210** is directly coupled to each of RAM **1220**, I/O controller **1240**, and disk **1250**. CPU **1210** operates by accessing RAM **1220** and disk **1250** in any conventional manner to execute program code (not shown) stored in at least one of RAM **1220** and disk **1250** to carry out the functions and acts described in connection with the operation of processing station **1200**. CPU **1210** preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the

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invention, such as the accumulation, transmission, organization, processing, and storage operations as well as the collection, translation, grouping, and delivery of wage assignment information.

In one embodiment, processing station **1200** receives wage assignment information at periodic intervals through input device **1260**. In a preferred embodiment, processing station **1200** receives wage assignment information at periodic intervals through input device **1260** in the form of electronic files containing the data relating to Child Support Orders from a plurality of states **215**, as shown in FIG. 2B. CPU **1210** then temporally stores either the wage assignment information or the wage assignment information file in wage assignment information database **1252** or in wage assignment information file database **1253**, both of which are stored in disk **1250**. If the wage assignment information is not formatted in a file, CPU **1210** initially stores the wage assignment information in wage assignment information database **1252** and then converts the wage assignment information into a wage assignment file and stores the file in wage assignment information file database **1253**. However, if the wage assignment information is initially formatted in a file, then CPU **1210** stores the wage assignment information directly in wage assignment information file database **1253**. Next, preferably, CPU **1210** translates the files in wage assignment information file **1253** into an EDI compatible file according to the ANSI X12 standard, specifically in the 521 record set, and these EDI files are then placed in EDI wage assignment file information file database **1254**, which is stored in disk **1250**. In order to translate the files into an EDI file, CPU **1210** accesses a rules database, such as a mapping rules database **1251**, which is stored in disk **1250**. Mapping rules database **1251** contains the codes needed by CPU **1210** to translate a file received from an initiator into an electronic file, preferably into an EDI file corresponding to the 521 record set. After translation, processing station **1200** then batches the EDI files in a database, such as EDI batch file database **1255**, which is stored in disk **1250**. In a preferred implementation, CPU **1210** batches the EDI files together based on a field containing information about the employer of the noncustodial parent (for example, element BPR10 of the 521 record set). In this implementation, CPU **1210** gathers all EDI files that indicate the same employer, regardless of the state of jurisdiction of origin, and batches those EDI files together in a single batched EDI file. Thereafter, CPU **1210** delivers the batched EDI file through output device **1270** to a recipient **130** on a periodic basis, which corresponds to the indicated recipient among the plurality of recipients **130**.

Notably, in the preferred embodiment discussed above, while it is preferable to send a batched EDI file to an indicated employer, the indicated employer may not be capable of electronically receiving EDI files for processing. To account for this possibility, processing station **1200** has a recipient delivery database **1257**, which is stored in disk **1250**. Prior to transmitting a batched EDI file to an indicated employer, CPU **1210** accesses recipient rules database **1257**. If recipient rules database **1257** indicates that the indicated employer can receive EDI file, then the EDI file is transmitted to the indicated employer electronically. Otherwise, CPU **1210** transmits the EDI file (i.e., preferably containing a batch file of one or more EDI files using the 521 record set) to the indicated employer through output device **470** by any transmission medium. In other words, the EDI file may even be sent through E-mail, facsimile transmission, or even the mail. As a further alternative to transmitting the files to the employer, CPU **1210** could transmit the EDI file via output

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device **1270** to a Web page or bulletin board (not shown). The indicated employer would receive the EDI file by accessing the Web page or bulletin board and then downloading the batched files. These alternative methods would use any conventional Internet server or computer system, access protocols, uploading protocols, downloading protocols, and security protocols. Data contained in one or more of these databases **1251**, **1252**, **1253**, **1254**, **1255**, and **1257** may be periodically obtained and updated from input device **1260**. Samples of the records and the respective fields contained in databases **1251**, **1252**, **1253**, **1254**, **1255**, and **1257** are shown in and described in connection with FIGS. 17–23.

FIG. **13** illustrates one representative embodiment of data processor **1010** shown in FIG. **10**, in a wage assignment collection and delivery system as shown in FIG. **1**. As shown in FIG. **13**, each recipient **130** preferably includes one or more processing stations **1300**, which could be a conventional personal computer, mainframe, or equivalent, each equipped with conventional hardware and having operating software to support a central processing unit (“CPU”) **1310**, a random access memory (“RAM”) **1320**, a monitor **1330**, an input/output (I/O) controller **1340**, a data storage device (disk) **1350**, an input device **1360**, and an output device **1370**. Although not depicted, processing station **1300** is capable of supporting peripheral equipment such as scanners, printers, modems, etc., in conventional manners.

As shown in FIG. **13**, CPU **1310** is directly coupled to each of RAM **1320**, I/O controller **1340**, and disk **1350**. CPU **1310** operates by accessing RAM **1320** and disk **1350** in any conventional manner to execute program code (not shown) stored in at least one of RAM **1320** and disk **1350** to carry out the functions and acts described in connection with the operation of processing station **1300**. CPU **1310** preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as the accumulation, storage, and processing of wage assignment information and the implementation of wage assignments.

In a preferred embodiment, processor station **1300** receives wage assignment information transmitted from accumulator **120** through an electronic medium by inputting an EDI file directly into CPU **1310** through input device **1360**. Data input at input device **1360** is received at CPU **1310** through I/O controller **1340** and stored in EDI file database **1352**, which is stored in disk **1350**. Other embodiments, however, include downloading the wage assignment information from an Internet bulletin board, from E-mail, or inputting the wage assignment information manually. Whatever the means of transmission of wage assignment information, in a preferred implementation, recipient **130** is the employer of the noncustodial parent subject to a wage assignment, and that assignment is then implemented in a manner as described in U.S. patent application Ser. No. 08/941,187. Recipient **130**, however, can process the wage assignment in any manner currently known in the art. Regardless of the manner of implementation, the data contained in database **1352** may be periodically obtained and updated from input device **1360**. Samples of the records and the respective fields contained in database **1352** is shown in and described in connection with FIG. **24**.

E. Database Formats

In FIGS. **11–13**, a number of databases are referenced with respect to the wage assignment collection and delivery systems shown in FIG. **1** and FIG. **2B**. The following

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paragraphs describe these databases, but for purposes of illustration, these databases are depicted containing sample data. In fact, the samples of the contents of wage assignment information database **1152**, mapping rules database **1251**, wage assignment information database **1252**, wage assignment information file database **1253**, EDI wage assignment information file database **1254**, EDI batch file database **1255**, recipient delivery database **1257**, and EDI file database **1352** are shown in FIGS. **16–24**. The specific data and fields illustrated in these figures represent only one possible embodiment of a type of record that can be stored in the databases. For purposes of illustration, the record depicted is that of the preferred embodiment, i.e., the 521 record set of the X12 standard. Therefore, in most cases, the fields shown in FIGS. **16–24** are relatively straight-forward and self-explanatory. However, note that, in addition to the disclosed databases, the data and fields of these databases, as well as the number of databases, can be readily modified from the described embodiments, for example, to include more or fewer data fields or different or additional records.

FIG. **14A–14B** depict a sample of an order/notice to withhold income for child support, i.e., a Child Support Order. As shown in FIG. **14A–14B**, the Child Support Order contains a plethora of information relating to a wage assignment for purposes of a child support obligation. Nonetheless, the form depicted in FIGS. **14A–14B** is a standard Child Support Order, as used by judicial entities and implemented by state agencies. For that reason, the form depicted in FIGS. **14A–14B** is hereby incorporated by reference as well as reproduced for purposes of reference in FIGS. **14A–14B**. For the following descriptions, FIGS. **14A–14B** are used as a reference for purposes of providing a working example of the databases in the wage assignment collection and delivery systems shown in FIG. **1** and FIG. **2B**.

FIGS. **15A–15B** depict a sample of a Child Support Order containing sample data for purposes of illustration. This sample data will be used as the sample content for the databases described in FIGS. **16–24**. As shown in FIGS. **15A–15B**, the sample Child Support Order has been issued in the State of Virginia by a court in Alexandria, with a order date of Jun. 12, 1998 and a court number of 98–123. The sample order is directed to the employer of John J. Doe which is Y Corp., located at 123 Main Street, Anytown, Va. 12345–00000. As shown in the Child Support Order, the social security number of John Doe is 123–45–6789, the case identifier is 98–123, and the custodial parent is Jane Doe. Furthermore, as also shown in this sample Child Support Order, the child’s name is Susie Doe, who has a date of birth of Jun. 1, 1990. As stated in the sample order, the Child Support Order pertains to an employer in the State of Virginia, and the order requires a wage assignment against the wages of John Doe at Y Corp. until Jun. 1, 2008. Under the terms of the sample Child Support Order, \$800.00 a month is required in child support, and \$100.00 a month is required in medical support; thus a total of \$900.00 a month is required for the wage assignment. The foregoing information from the sample Child Support Order is used for purposes of illustration in FIGS. **16–24**.

FIG. **16** illustrates a sample of the contents of wage assignment information database **1152** in data processor **410** at initiator **110** as shown in FIG. **11**, using sample information in a preferred implementation of a wage assignment collection and delivery system. Wage assignment information database **1152**, contains a listing of the information relating to a wage assignment, such as the information contained in a Child Support Order, such as, for example,

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sample order **1500**, as depicted in FIGS. **15A–15B**. As shown in FIG. **16**, wage assignment information database **1152** contains **8** numbered fields but provides for an unlimited number of additional fields. As also shown in FIG. **16**, a wage assignment may contain various types of information, which are recorded in wage assignment information database **1152**. The wage assignment information in wage assignment information database **1152** may be recorded in any order.

FIG. **17** illustrates a sample of the contents of wage assignment information database **1252** in data processor **505** at accumulator **120** as shown in FIG. **12**, using sample information in a preferred implementation of a wage assignment collection and delivery system. Wage assignment information database **1252** contains the same information as wage assignment information database **1152**. Essentially, initiator **110** transmits the contents of wage assignment information database **1152** to accumulator **120**. Following such transmission, accumulator **120** initially records the information received from initiator **110** in wage assignment information database **1252**. Wage assignment information database **1252** is thus a temporary database at accumulator **120**.

FIG. **18** illustrates a sample of the contents of wage assignment information file database **1253** in data processor **505** at accumulator **120** as shown in FIG. **12**, using sample information in a preferred implementation of a wage assignment collection and delivery system. As shown in FIG. **18**, wage assignment information file database **1253** contains nine fields but allows for an unlimited number of additional fields. In one implementation, field **1** identifies initiator **110**. Thus, as shown in FIG. **18**, field **1** shows two initiators, labeled I_1 and I_2 . For I_1 , there is one file in wage assignment information file database **1253**, and for I_2 there are two files in wage assignment information file database **1253**. Significantly, as shown in FIG. **18**, the order of the information in each field need not be standardized for purposes of wage assignment information file database **1253**.

FIGS. **19A–19F** illustrate a sample of the form and contents of mapping rules database **1251** in data processor **505** at accumulator **120** as shown in FIG. **12**, using a sample mapping form and sample mapping rules for a preferred implementation of a wage assignment collection and delivery system. FIGS. **19A–19B** demonstrate how a mapping database may be created for purposes of map processing. FIGS. **19A–19B** depict the same Child Support Order of FIGS. **14A–14B**, except that each entry possibility has a mapping field. FIGS. **19A–19B** show these mapping fields as fields **1a–36d**. Correspondingly, FIGS. **19C–19F** depict a table containing the mapping fields of the Child Support Order shown in FIGS. **19A–19B**. In a preferred implementation, as depicted in FIGS. **19C–19F**, the mapping fields correspond to the 521 record set. Thus, in this preferred implementation, the fields of the 521 record set correspond to the fields of mapping rules database **1251**. Thus, when the wage assignment collection and delivery system translates a wage assignment to an EDI file format, as in the above-described preferred embodiment, mapping rules database **1251** contains records having fields corresponding to, for example, the fields identified in FIGS. **19C–19F**.

FIG. **20** illustrates a sample of the contents of EDI wage assignment information file database **1254** in data processor **505** at accumulator **120** as shown in FIG. **12**, using sample information in a wage assignment collection and delivery system. In a preferred implementation, using mapping rules database **1251**, data processor **505** at accumulator **120** maps

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the information contained in wage assignment information file database **1253** to an EDI format, according to the fields set forth in mapping rules database **1251**. In this manner, the information in wage assignment information file database **1253** is placed in fields corresponding to the mapping rules of mapping rules database **1251**. As noted above, in a preferred implementation, mapping rules database **1251** contains the mapping rules for the 521 record set. Once this mapping occurs, the files are placed in EDI wage assignment information file database **1254**, as shown in FIG. **20**. Thus, in this preferred implementation, using mapping rules database **1251**, each wage assignment is mapped to the proper field for the 521 record set. As shown in FIG. **20**, fields **1a–36d** contain these fields of the 521 record set, which correspond to the table shown in FIGS. **19C–19F**. Thus, as shown in FIGS. **19C–19F** and FIG. **20**, and using the mapping rules from mapping rules database **1251**, field **1a** corresponds to the name of the state, field **1b** corresponds to the name of the jurisdiction, field **2** corresponds to the date of the order, field **3** corresponds to the identifying number of the court, field **6a** corresponds to the withholder's name, field **36d** corresponds to the facsimile number for the person named in field **36a**, etc. In FIG. **20**, these fields are delineated as rows. In FIG. **20**, the columns pertain to the plurality of initiators **110**, labeled I_1 , I_2 , I_3 , etc.

FIG. **21** illustrates a sample of the contents of EDI batch file database **1255** in data processor **505** at accumulator **120** as shown in FIG. **12**, using sample information in a wage assignment collection and delivery system. As shown in FIG. **21**, in a preferred implementation, EDI batch file database **1255** contains records having fields with identifiers corresponding to, for example, fields corresponding to the 521 record set. Thus, EDI batch file database **1255** is similar to EDI wage assignment information file database **1254**. However, EDI batch file database **1255** contains EDI files that are batched by a particular field, such as, for example, one field from the 521 record set. In a preferred implementation, EDI batch file database **1255** contains EDI files that are batched on the recipient field (i.e., field **BPR10** of the 521 record set). Thus, in this preferred implementation, as shown in FIG. **21**, EDI batch file database **1255** contains EDI files, which are batched on the recipient.

FIG. **22** illustrates a sample of the contents of recipient delivery database **1257** in data processor **505** at accumulator **120** as shown in FIG. **12**, containing sample information for a wage assignment collection and delivery system. As shown in FIG. **22**, a plurality of recipients **130** may accept the transmittal of EDI files by a number of methods, including, but not limited to, FTP, Internet, tape, and diskette. In a preferred implementation, recipient delivery database **1257** contains the methods of delivery for EDI files from an accumulator **120** to a plurality of recipients **130**. As shown in FIG. **22**, for example, X Corp. accepts the transmittal of EDI files via FTP and diskette but not via Internet or tape. Similarly, Y Corp. accepts the transmittal of EDI files via tape but not via FTP, Internet, or diskette. Once accumulator **120** has determined the proper means of transmittal, the batched EDI file for a particular recipient **130** is removed from EDI batch file database **1255** and transmitted in the manner indicated by recipient delivery database **1257**. Notably, as shown in FIG. **22**, an unlimited number of delivery methods are possible.

FIG. **23** does not depict any database but does illustrate a sample of an EDI file transmittal from data processor **505** at accumulator **120** as shown in FIG. **12**, using sample information in a preferred implementation of a wage assignment

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collection and delivery system. As shown in FIG. 23, EDI batch file database 1255 contained two EDI files for one particular recipient 130 (i.e., Y Corp.) from a plurality of recipients 130. As shown in this example, recipient 130 is Y Corp., and EDI batch file database 1255 contained two EDI files for Y Corp. within the EDI batch file. Thus, when accumulator 120 delivers the EDI batch file to this recipient, the transmittal of the EDI batch file will include two EDI files. Notably, because this recipient accepts EDI files via FDP or diskette, as indicated in the recipient delivery database 1257 as shown in FIG. 22, the transmittal of the EDI batch file shown in FIG. 23 may take place by either of these two methods.

FIG. 24 illustrates a sample of the contents of EDI file database 1352 from data processor 1010 at recipient 130 as shown in FIG. 13, using the sample information for a preferred implementation of a wage assignment collection and delivery system. As shown in FIG. 24, the contents of EDI file database 1352 is the same as that transmitted from accumulator 120, as shown by the EDI batch file described in FIG. 23. Notably, however, depending on the method of delivery to recipient 110, EDI file database 1352 may accept the information from accumulator 120 by any known delivery method, as indicated by recipient delivery database 1257 shown in FIG. 22.

F. Methods of Operation

As shown in FIG. 3, in processing a wage assignment from initiator 110 to recipient 130 via accumulator 120, the system shown and described in connection with FIG. 1 entails several distinct methods of operation. These methods include the processes that take place at initiator 110, the processes that take place at accumulator 120, and the processes that take place at recipient 130. The steps associated with these processes are described in connection with FIGS. 25-32 and can be performed in any order, unless otherwise specified or dictated by the steps themselves.

In describing the processes consistent with the possible implementations of a system as shown and described in connection with FIGS. 1 and 2B, alternative implementations of systems consistent with the invention are described herein. For example, FIG. 25 illustrates the processes performed by one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. In this embodiment, initiator 110 initiates a wage assignment (step 2510). Next, accumulator 120 collects, translates, groups, and delivers the wage assignment information (step 2520). Finally, recipient 130 receives a wage assignment for processing and implementation (2530). FIGS. 26-28 depict flow diagrams illustrating the series of particular steps performed by a wage assignment collection and delivery system as shown in FIG. 25.

FIG. 26 illustrates the steps performed by initiator 110 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 26, initiator 110 receives a wage assignment order for processing (step 2610). Next, initiator 110 inputs the wage assignment information into a database (step 2620). At some point in time, and preferably on a periodic basis, initiator 110 then transmits the wage assignment information contained in the wage assignment information database to accumulator 120 (step 2630).

FIG. 27 illustrates the steps performed by accumulator 120 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 27, accumulator 120 receives wage assignment information

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from initiator 110 (step 2710). As described above, accumulator 120 may receive an unlimited number of wage assignment information transmissions from an unlimited number of initiators 110. Accordingly, accumulator 120 collects all wage assignment information into a wage assignment information file (step 2720). After collection, in a preferred implementation, accumulator 120 then translates each wage assignment in the wage assignment information file into an EDI wage assignment information file (step 2730). After translation, accumulator 120 then groups the EDI wage assignment information files by batching the files based on one field from the file. Preferably, the grouping of EDI wage assignment information files during the batching process occurs pursuant to the recipient field, so that the EDI batch files are batched based on the recipient (step 2740). After grouping, accumulator 120 then delivers an EDI batch file to each of a plurality of recipients 130. In a preferred implementation, where the EDI batch files are batched on the recipient, each recipient receives a single batch file containing all wage assignments for that recipient (step 2750).

FIG. 28 illustrates the steps performed by recipient 130 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 28, recipient 130 receives an EDI batch file from accumulator agency 120 (step 2810). Next, recipient 130 processes the wage assignment information from the EDI batch file (step 2820). As noted above, an EDI batch file may contain one or more EDI files. Finally, in processing the wage assignment information from the EDI batch file, each wage assignment is implemented at recipient 130 by accounts payable, human resources, or any other payroll system or method (step 2830). For example, in a preferred implementation relating to a child support obligation, a child support payment is withheld from the salary of a noncustodial parent, and the payment is then disbursed to the appropriate payee.

Similar to FIG. 25, FIG. 29 illustrates the processes performed by another embodiment of a wage assignment collection and delivery system as shown in FIG. 2B. In this embodiment, state 215 initiates a wage assignment (step 2910). Next, accumulator 120 collects, translates, groups, and delivers the wage assignment information (step 2920). Finally, employer 235 receives a wage assignment for processing (2930). FIGS. 30-32 depict flow diagrams illustrating the series of particular steps performed by a wage assignment collection and delivery system as shown in FIG. 29.

FIG. 30 illustrates the steps performed by state 215 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 2B. As shown in FIG. 30, state 215 receives a wage assignment order for processing (step 3010). Next, state 215 inputs the wage assignment information into a database (step 3020). At some point in time, and preferably on a periodic basis, state 215 then transmits the wage assignment information contained in the wage assignment information database to accumulator 120 (step 3030). Notably, FIG. 30 performs the same steps as described in FIG. 26, except that instead of generally referencing an initiator 110 as in FIG. 26, FIG. 30 references a state 215, which refers more specifically to a state or a state entity.

FIG. 31 illustrates the steps performed by accumulator 120 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 2B. As shown in FIG. 31, accumulator 120 receives wage assignment information from state 215 (step 3110). As described above, accumulator 120 may receive an unlimited number of wage assignment information transmissions from an unlimited number of

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states **215**. Next, accumulator **120** certifies the employer denoted by the wage assignment information (step **3105**). If the employer participates with the accumulator (e.g., subscribes to the accumulator service), then the wage assignment information is accepted, but if the employer does not participate with the accumulator (e.g., does not subscribe to the accumulator service), then the wage assignment information is rejected (step **3120**). Accordingly, if the wage assignment information is accepted, accumulator **120** collects all wage assignment information into a wage assignment information file (step **3130**). After collection, in a preferred implementation, accumulator **120** then translates each wage assignment in the wage assignment information file into an EDI wage assignment information file (step **3140**). After translation, accumulator **120** then groups the EDI wage assignment information files by batching the files based on one field from the file. Preferably, the grouping of EDI wage assignment information files during the batching process occurs pursuant to the recipient field, so that the EDI batch files are batched based on the recipient (step **3150**). After grouping, accumulator **120** then delivers an EDI batch file to each of a plurality of employers **235**. In a preferred implementation, where the EDI batch files are batched on the employer, each employer receives a single batch file containing all wage assignments for that employer (step **3160**). Notably, FIG. **31** essentially performs the same steps as described in FIG. **27**, except that FIG. **31** also contains an employer certification component.

FIG. **32** illustrates the steps performed by employer **235** in one embodiment of a wage assignment collection and delivery system as shown in FIG. **2B**. As shown in FIG. **32**, employer **235** receives an EDI batch file from accumulator agency **120** (step **3210**). Next, employer **235** processes the wage assignment information from the EDI batch file (step **3220**). As noted earlier, an EDI batch file may contain one or more EDI files. Finally, in processing the wage assignment information from the EDI batch file, each wage assignment is implemented at employer **235** by accounts payable, human resources, or any other payroll system or method (step **3230**). Notably, FIG. **32** performs the same steps as described in FIG. **28**, except that instead of generally referencing a recipient **130** as in FIG. **28**, FIG. **32** more specifically references an employer **235**.

CONCLUSION

The systems consistent with the invention provide for more efficient and more economical apparatus and methods for collection, translation, grouping, and delivery of wage assignment information. The systems first collect information relating to wage assignment information, translate the information into an EDI format, which is commonly referred to as a record set. Then, the EDI files are grouped based on the data contained in one or more element fields of the EDI record set and subsequently delivered to recipients who process the wage assignment information in any known method. This improved wage assignment collection and delivery apparatus and methodology provide many advantages over the current wage assignment and collection and delivery technologies.

As described above, it will be apparent to those skilled in the art that various modifications and variations can be made in the apparatus and methods of the present invention without departing from the spirit and scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention, provided they come within the scope of the appended claims and their equivalents. In this context, equivalents means each and

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every implementation for carrying out the functions recited in the claims, even if not explicitly described herein.

What is claimed is:

1. An accumulator, comprising:

a collecting component configured to collect a plurality of wage assignments from a plurality of initiators;

a translating component configured to translate the wage assignments into files with a standard wage assignment format, the format including data in at least one data field;

a grouping component configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format; and

a delivering component configured to deliver a batch file to each of a plurality of recipients.

2. The system of claim **45**, wherein the collecting component includes an inputting component configured to input the wage assignments into a database.

3. The system of claim **45**, wherein the translating component includes a generating component configured to generate an electronic data interchange (EDI) file.

4. The system of claim **47**, wherein the generating component further includes a utilizing component configured to utilize the 521 record set.

5. The system of claim **45**, wherein the main translating component comprises:

an identifying component configured to identify a set of mapping rules; and

a subordinate translating component configured to translate the wage assignments according to the mapping rules.

6. The system of claim **45**, further comprising a certifying component configured to certify the recipient.

7. A method of processing wage assignments at an accumulator, comprising the steps, performed by a processor, of:

collecting a plurality of wage assignments from a plurality of initiators;

translating the wage assignments into files with a standard wage assignment format, the format including data in at least one data field;

grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format; and

delivering a batch file to each of a plurality of recipients.

8. The method of claim **51**, wherein the collecting step includes inputting the wage assignments into a database.

9. The method of claim **51**, wherein the step of translating includes generating an electronic data interchange (EDI) file.

10. The method of claim **53**, wherein the step of generating an EDI file further includes utilizing the 521 record set.

11. The method of claim **51**, wherein the translating step comprises the substeps of:

identifying a set of mapping rules; and

translating the wage assignments according to the mapping rules.

12. The method of claim **51**, further comprising certifying the recipient.

13. An accumulator, comprising:

means for collecting a plurality of wage assignments from a plurality of initiators;

means for translating the wage assignments into files with a standard wage assignment format, the format including data in at least one data field;

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means for grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format; and

means for delivering a batch file to each of a plurality of recipients.

14. A computer usable medium having computer readable code embodied therein for processing wage assignments at an accumulator, the computer usable medium comprising:

a collecting module configured to collect a plurality of wage assignments from a plurality of initiators;

a translating module configured to translate the wage assignments into files with a standard wage assignment format, the format including data in at least one data field;

a grouping module configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format; and

a delivering module configured to deliver a batch file to each of a plurality of recipients.

15. A data processing system for collecting and delivering wage assignment information of a person, comprising:

a first receiving component configured to receive wage assignment information for the person;

a storing component configured to store the wage assignment information in a database at an agency;

a transmitting component configured to transmit the database from the agency to an accumulator;

a collecting component configured to collect the database at the accumulator;

a translating component configured to translate the database into a file with a standardized format, the standardized format includes data stored in at least one data field;

a batching component configured to batch the standardized format file based at least on the data stored in the one data field;

a delivering component configured to deliver the batched standardized format file to a recipient;

a second receiving component configured to receive at the recipient the batched standardized format file; and

a processing component configured to process the standardized format file to initiate the wage assignment.

16. The system of claim **15**, where the person is a noncustodial parent.

17. The system of claim **15**, wherein the collecting component includes an electronic file receiving component configured to receive the database as an electronic file.

18. The system of claim **15**, wherein the translating component includes an EDI generating component configured to generate an electronic data interchange (EDI) file.

19. The system of claim **18**, wherein the translating component further includes a 521 record set generating component to generate an EDI file using the 521 record set.

20. The system of claim **19**, further comprising:

an identifying component configured to identify a set of translating rules; and

a subordinate translating component configured to translate the wage assignment information according to the translation rules.

21. A method of collecting and delivering wage assignment information of a person, comprising the steps, performed by a processor, of:

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receiving wage assignment information for the person; storing the wage assignment information in a database at an agency;

transmitting the database from the agency to an accumulator;

collecting the database at the accumulator;

translating the database into a file with a standardized format, the standardized format includes data stored in at least one data field;

batching the standardized format file based at least on the data stored in the one data field;

delivering the batched standardized format file to a recipient;

receiving at the recipient the batched standardized format file; and

processing the standardized format file to initiate the wage assignment.

22. The method of claim **21**, where the person is a noncustodial parent.

23. The method of claim **21**, wherein the collecting step includes receiving the database as an electronic file.

24. The method of claim **21**, wherein the translating step includes generating an electronic data interchange (EDI) file.

25. The method of claim **24**, wherein the translating step further includes generating an EDI file using the 521 record set.

26. The method of claim **25**, further comprising:

identifying a set of translating rules; and

translating the wage assignment information according to the translation rules.

27. A system for collecting and delivering wage assignment information of a person, comprising:

means for receiving wage assignment information for the person;

means for storing the wage assignment information in a database at an agency;

means for transmitting the database from the agency to an accumulator;

means for collecting the database at the accumulator;

means for translating the database into a file with a standardized format, the standardized format includes data stored in at least one data field;

means for batching the standardized format file based at least on the data stored in the one data field;

means for delivering the batched standardized format file to a recipient;

means for receiving at the recipient the batched standardized format file; and

means for processing the standardized format file to initiate the wage assignment.

28. A computer usable medium having computer readable code therein for collecting and delivering wage assignment information of a person, the computer usable medium comprising:

a first receiving module configured to receive wage assignment information for the person;

a storing module configured to store the wage assignment information in a database at an agency;

a transmitting module configured to transmit the database from the agency to an accumulator;

a collecting module configured to collect the database at the accumulator;

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a translating module configured to translate the database into a file with a standardized format, the standardized format includes data stored in at least one data field;

a batching module configured to batch the standardized format file based at least on the data stored in the one data field;

a delivering module configured to deliver the batched standardized format file to a recipient;

a second receiving module configured to receive at the recipient the batched standardized format file; and

a processing module configured to process the standardized format file to initiate the wage assignment.

29. A system for collecting and delivering a plurality of wage assignment information representing child support payments for a plurality of noncustodial parents, comprising:

a generating component configured to generate wage assignment information for a noncustodial parent;

a storing component configured to store the wage assignment information in a file in a database at a state entity;

a transmitting component configured to transmit the database from the state entity to an accumulator;

a collecting component configured to collect a plurality of databases containing files with wage assignment information into a single database at the accumulator;

a translating component configured to translate the files in the single database into electronic data interchange (EDI) files;

a batching component configured to batch the EDI files based on the recipient field;

a delivering component configured to deliver a batched EDI file to each of a plurality of recipients;

a receiving component configured to receive at each recipient a batched EDI file; and

a processing component configured to process the batched EDI file to initiate the wage assignment against a wage of the noncustodial parent.

30. The system of claim **29**, where the state entity is a child support department.

31. The system of claim **29**, wherein the translating component further includes a 521 record set generating component configured to generate EDI files using the 521 record set.

32. The system of claim **29**, further comprising:

an identifying a set of translating rules; and

a rules translating component configured to translate the wage assignment information according to the translation rules.

33. The system of claim **29**, wherein the processing component includes a payment and disbursement processing component configured to process payments and disbursements.

34. The system of claim **29**, where the recipient is an employer.

35. The system of claim **34**, further comprising a certifying component configured to certify the employer.

36. A method of collecting and delivering a plurality of wage assignment information representing child support payments for a plurality of noncustodial parents, comprising the steps, performed by a processor, of:

generating wage assignment information for a noncustodial parent;

storing the wage assignment information in a file in a database at a state entity;

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transmitting the database from the state entity to an accumulator;

collecting a plurality of databases containing files with wage assignment information into a single database at the accumulator;

translating the files in the single database into electronic data interchange (EDI) files;

batching the EDI files based on the recipient field;

delivering a batched EDI file to each of a plurality of recipients;

receiving at each recipient a batched EDI file; and

processing the batched EDI file to initiate the wage assignment against a wage of the noncustodial parent.

37. The method of claim **36**, where the state entity is a child support department.

38. The method of claim **36**, wherein the translating step further includes generating EDI files using the 521 record set.

39. The method of claim **36**, further comprising:

identifying a set of translating rules; and

translating the wage assignment information according to the translation rules.

40. The method of claim **36**, wherein the processing step includes payment and disbursement processing.

41. The method of claim **36**, where the recipient is an employer.

42. The method of claim **41**, further comprising certifying the employer.

43. A system for collecting and delivering a plurality of wage assignment information representing child support payments for a plurality of noncustodial parents, comprising:

means for generating wage assignment information for a noncustodial parent;

means for storing the wage assignment information in a file in a database at a state entity;

means for transmitting the database from the state entity to an accumulator;

means for collecting a plurality of databases containing files with wage assignment information into a single database at the accumulator;

means for translating the files in the single database into electronic data interchange (EDI) files;

means for batching the EDI files based on the recipient field;

means for delivering a batched EDI file to each of a plurality of recipients;

means for receiving at each recipient a batched EDI file; and

means for processing the batched EDI file to initiate the wage assignment against a wage of the noncustodial parent.

44. A computer usable medium having computer readable code embodied therein for collecting and delivering a plurality of wage assignment information representing child support payments for a plurality of noncustodial parents, the computer usable medium comprising:

a generating module configured to generate wage assignment information for a noncustodial parent;

a storing module configured to store the wage assignment information in a file in a database at a state entity;

a transmitting module configured to transmit the database from the state entity to an accumulator;

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- a collecting module configured to collect a plurality of databases containing files with wage assignment information into a single database at the accumulator;
- a translating module configured to translate the files in the single database into electronic data interchange (EDI) 5 files;
- a batching module configured to batch the EDI files based on the recipient field;

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- a delivering module configured to deliver a batched EDI file to each of a plurality of recipients;
- a receiving module configured to receive at each recipient a batched EDI file; and
- a processing module configured to process the batched EDI file to initiate the wage assignment against a wage of the noncustodial parent.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,567,821 B1
DATED : May 20, 2003
INVENTOR(S) : John Polk

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 25.

Line 44, claim 32 should read as follows:

-- 32. The system of claim **29**, further comprising:

an identifying component configured to identify a set of translating rules; and

a rules translating component configured to translate the wage assignment information according to the translation rules. --

Signed and Sealed this

Sixteenth Day of September, 2003

A handwritten signature in black ink, appearing to read "James E. Rogan", with a long horizontal flourish extending from the bottom of the signature.

JAMES E. ROGAN
Director of the United States Patent and Trademark Office

EXHIBIT E

(12) **United States Patent**
Polk

(10) **Patent No.:** **US 7,072,909 B2**
(45) **Date of Patent:** **Jul. 4, 2006**

(54) **METHOD AND APPARATUS FOR
ELECTRONIC COLLECTION,
TRANSLATION, GROUPING, AND
DELIVERY OF WAGE ASSIGNMENT
INFORMATION**

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(75) Inventor: **John Polk**, McLean, VA (US)

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(73) Assignee: **ACS State & Local Solutions, Inc.**,
Teaneck, NJ (US)

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 287 days.

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(21) Appl. No.: **10/155,965**

(Continued)

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(65) **Prior Publication Data**

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Primary Examiner—Greta Robinson

Assistant Examiner—Kuen S. Lu

(74) *Attorney, Agent, or Firm*—Finnegan, Henderson,
Farabow, Garrett & Dunner, L.L.P.

Related U.S. Application Data

(57)

ABSTRACT

(63) Continuation of application No. 09/200,943, filed on
Nov. 30, 1998, now Pat. No. 6,567,821.

(60) Provisional application No. 60/085,731, filed on May
15, 1998.

(51) **Int. Cl.**
G06F 17/30 (2006.01)
G06F 17/00 (2006.01)
G06F 17/60 (2006.01)

(52) **U.S. Cl.** **707/104.1; 707/3; 705/40**

(58) **Field of Classification Search** **707/104.1,**
707/1, 3; 705/40

See application file for complete search history.

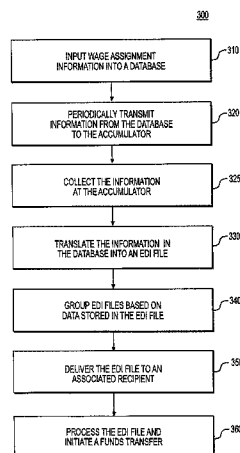
This disclosure describes a system that electronically col-
lects, translates, groups, and delivers wage assignment infor-
mation from at least one initiator to at least one recipient via
an accumulator. An initiator initially receives the wage
assignment information. Then, an accumulator collects the
wage assignment information from at least one initiator,
such as a government agency. The accumulator then trans-
lates the wage assignment information into a format com-
patible with electronic data interchange (EDI), such as the
ANSI X12 standard. The accumulator then groups the EDI
wage assignment information into specific files, batching the
files based upon one data field contained within the wage
assignment information data set, such as a recipient. The
accumulator then delivers a batched EDI wage assignment
file to each respective recipient. Once the EDI wage assign-
ment file is received by the recipient, the wage assignment
may then be implemented.

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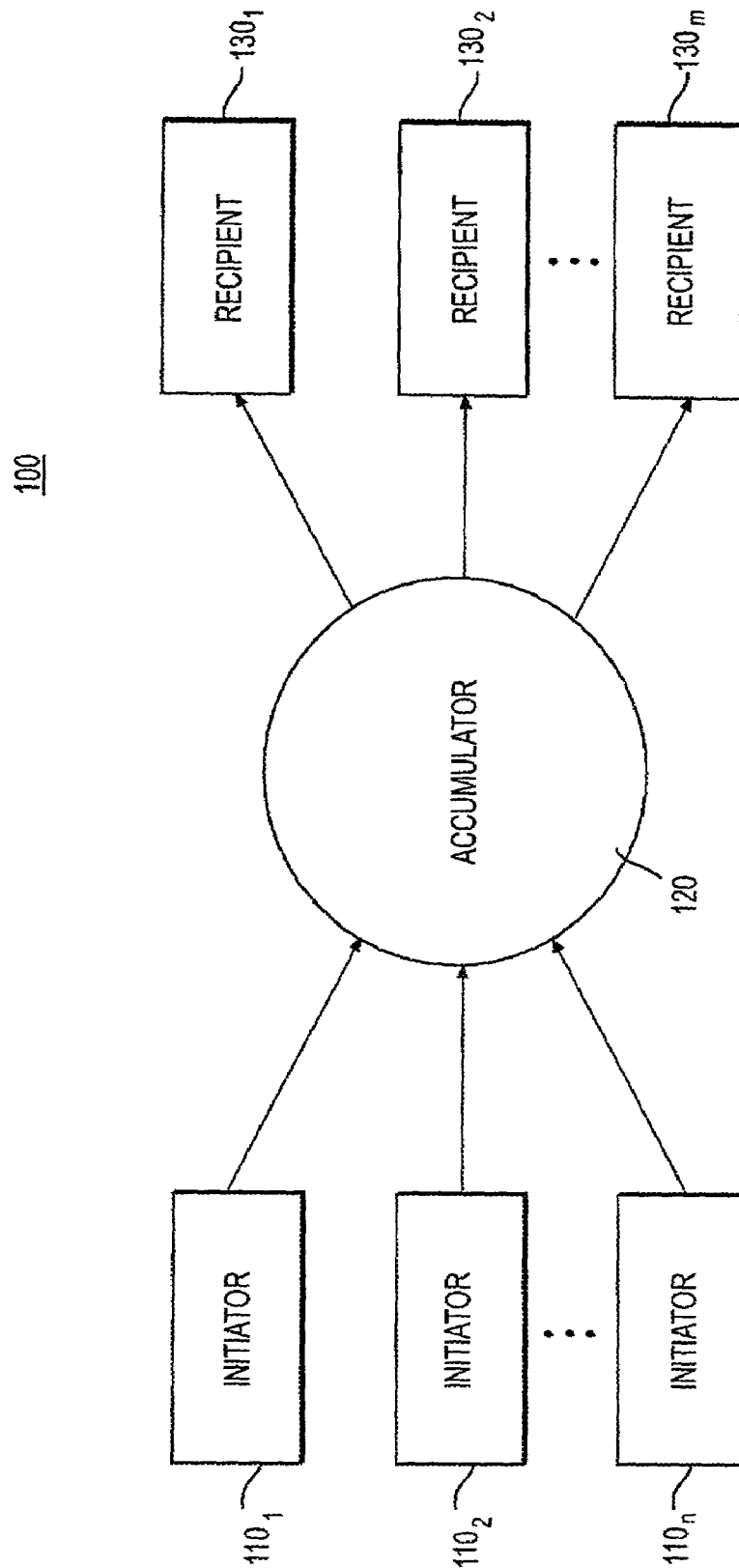


FIG. 1

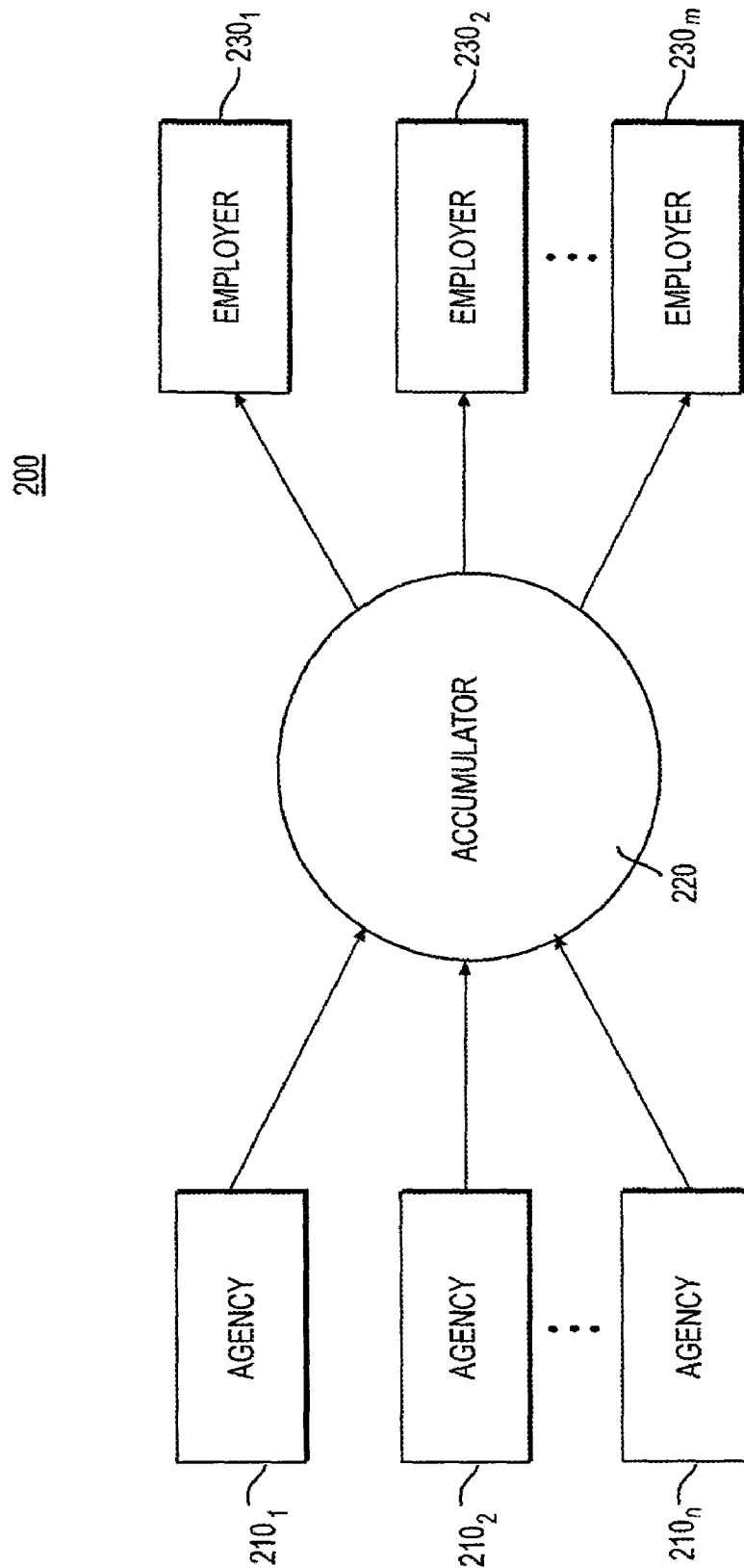


FIG. 2A

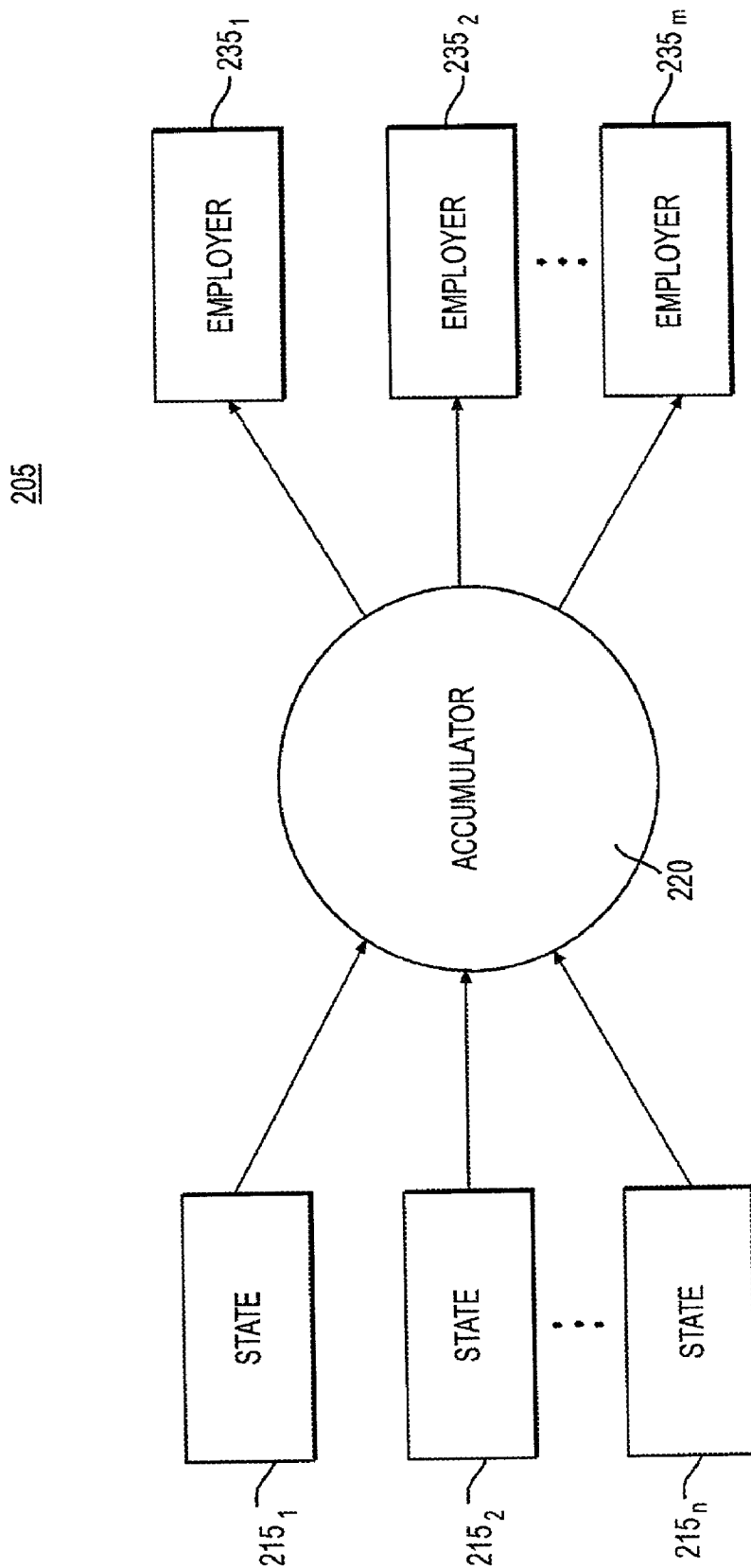


FIG. 2B

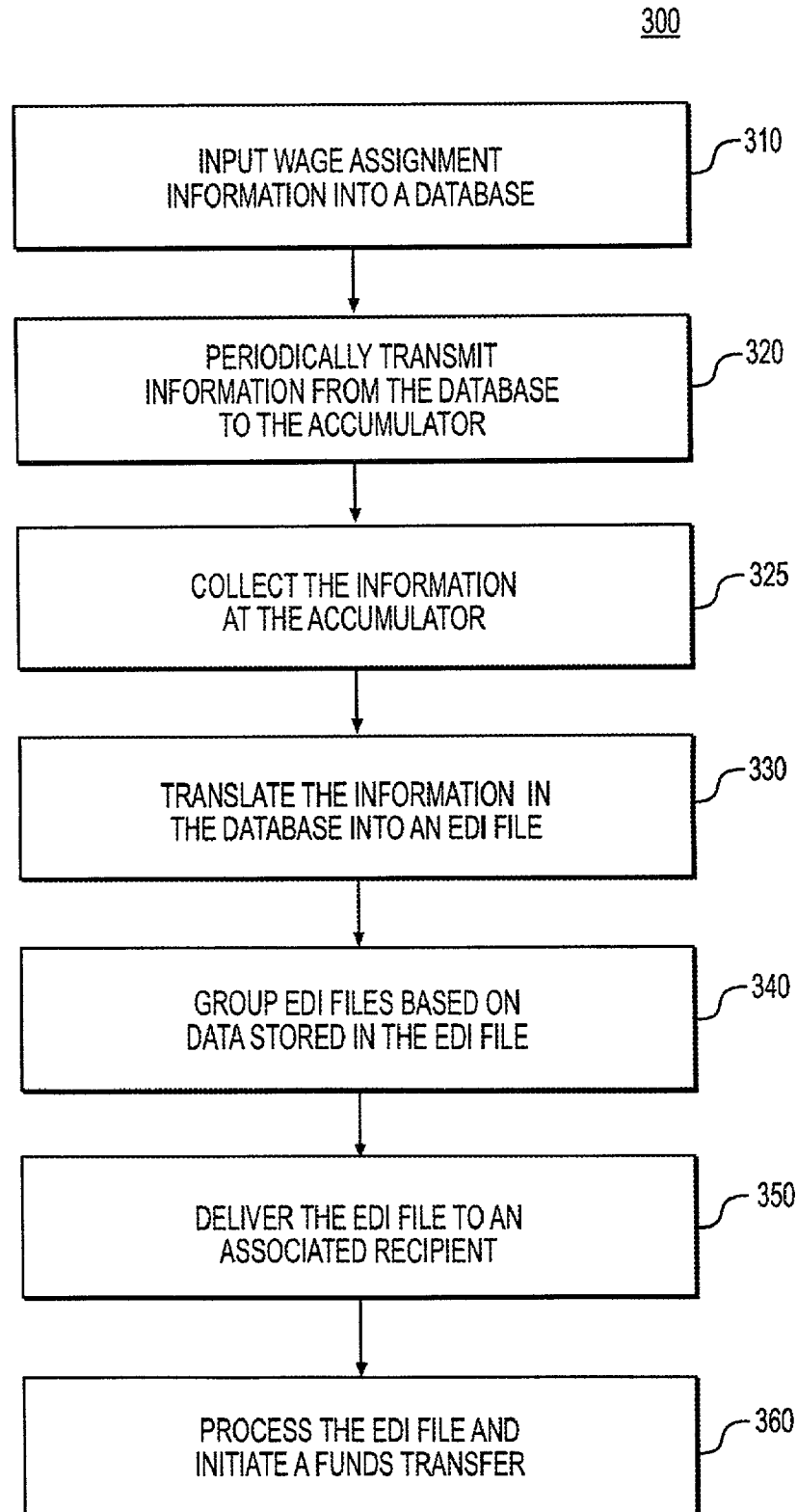


FIG. 3

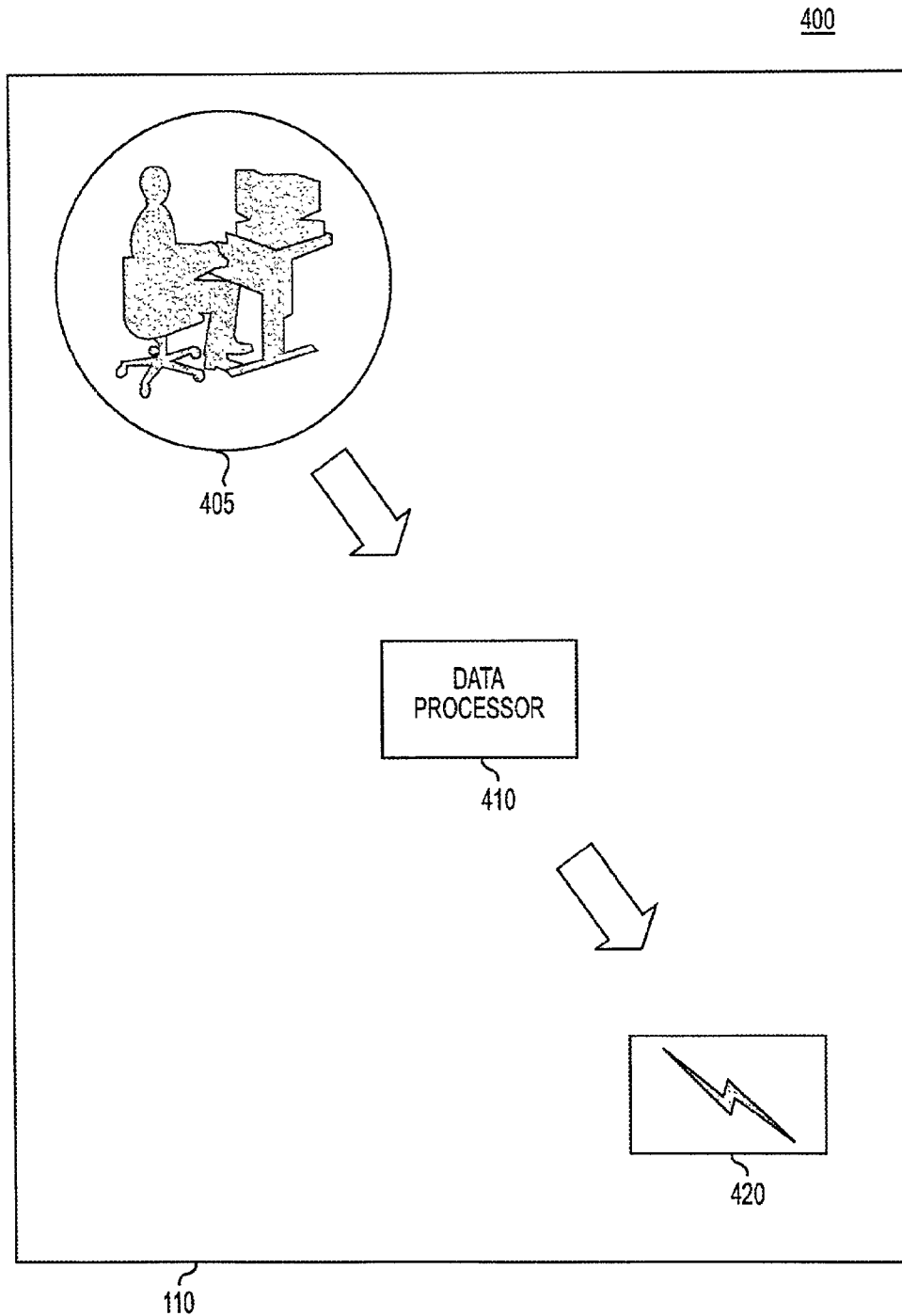
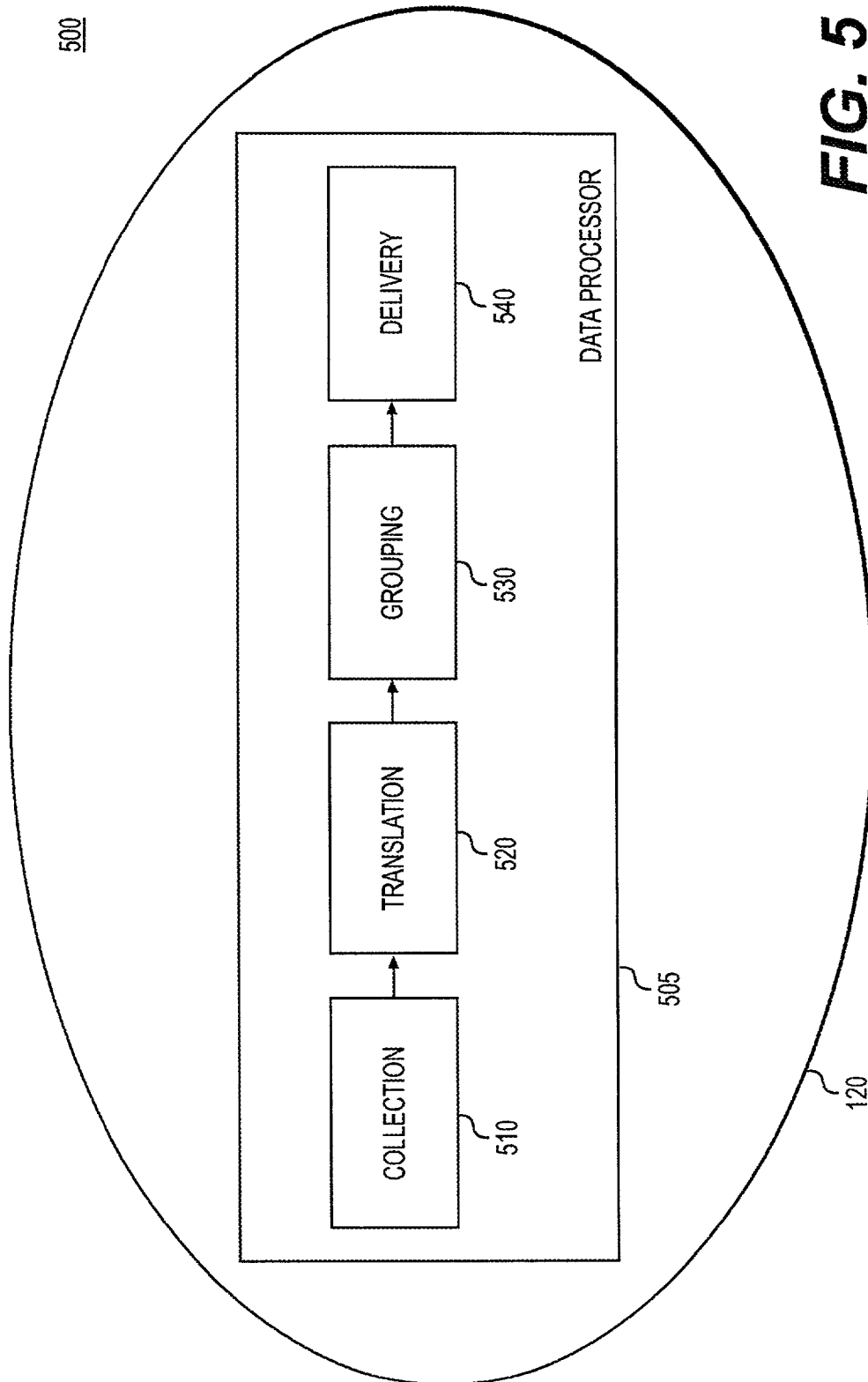


FIG. 4



600

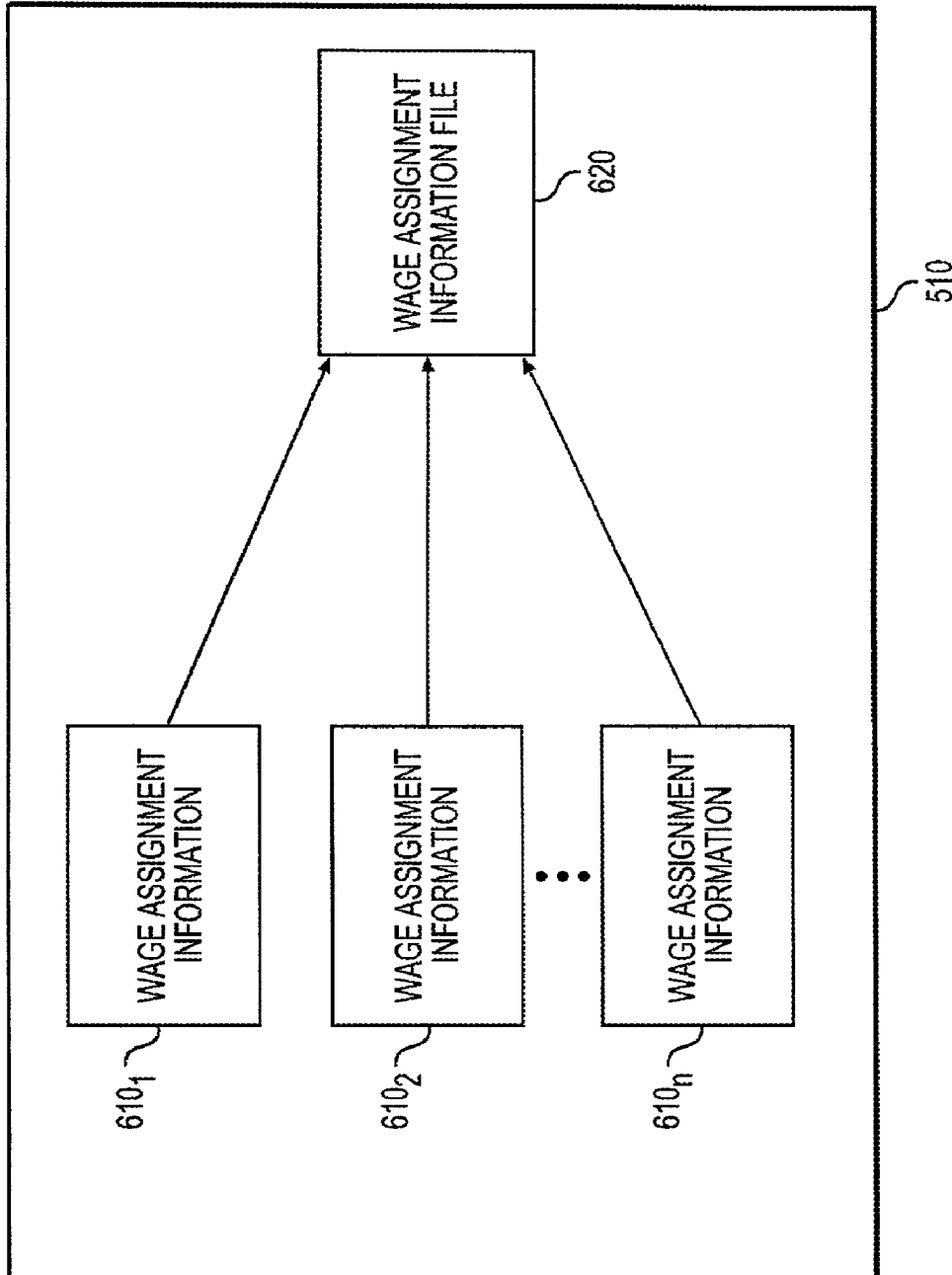


FIG. 6

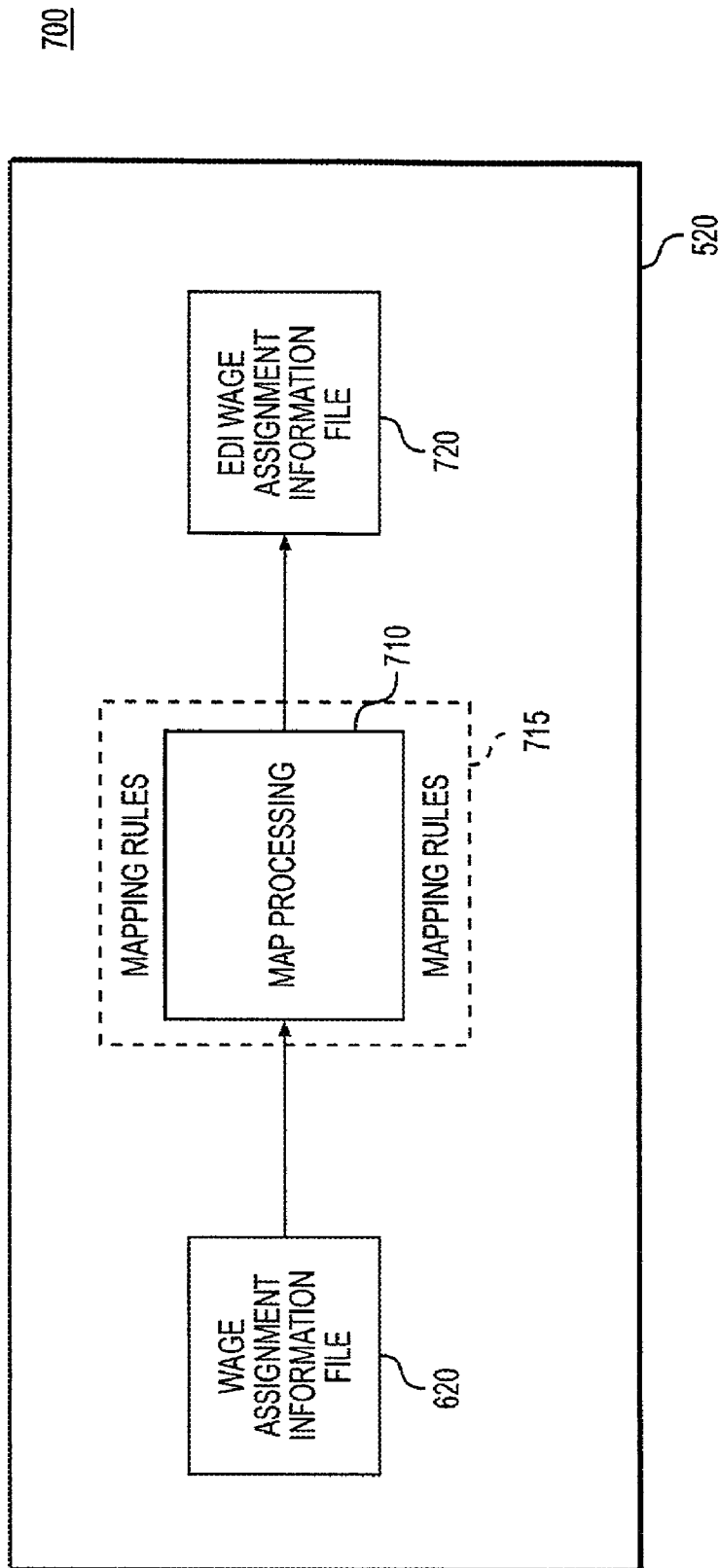
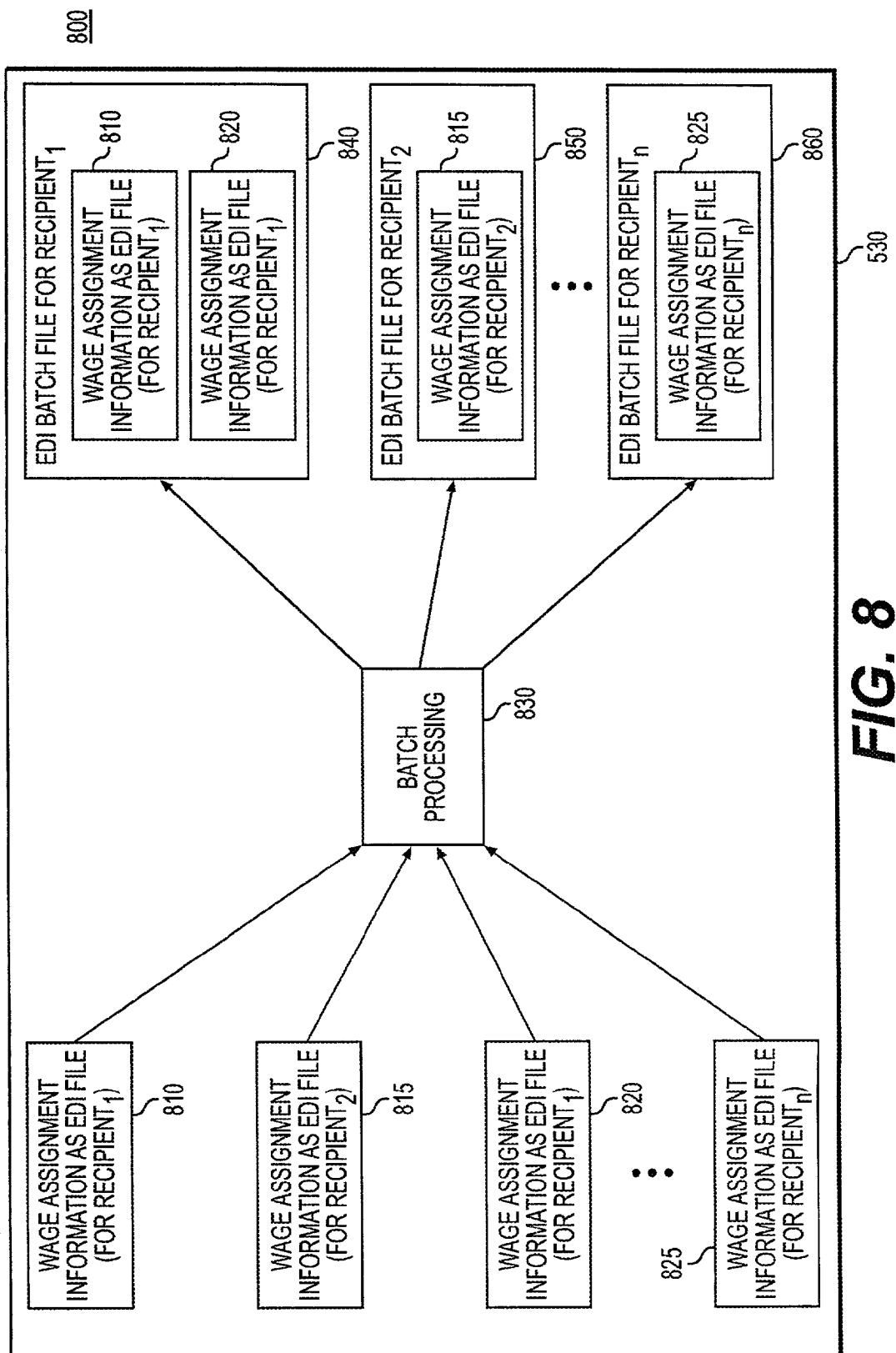


FIG. 7



900

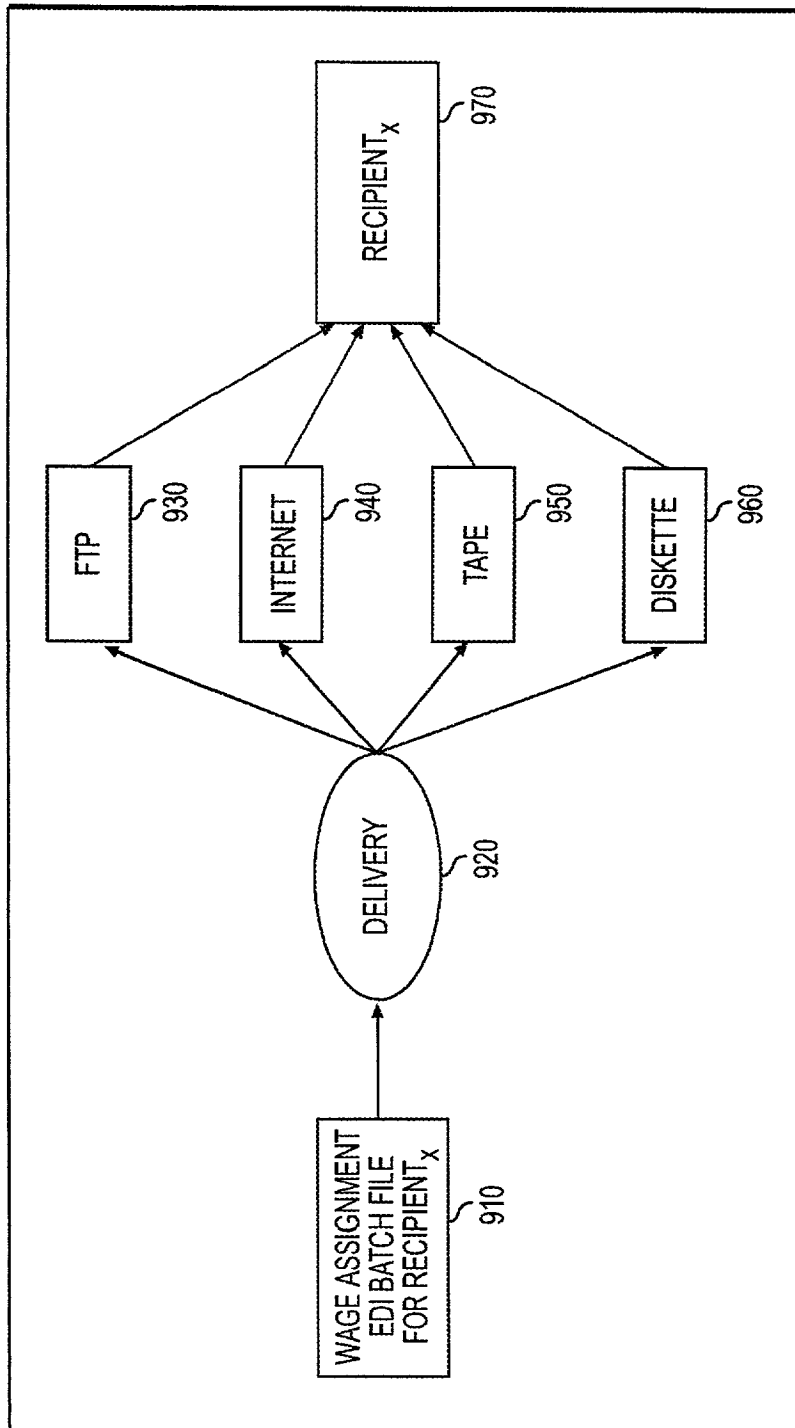


FIG. 9

1000

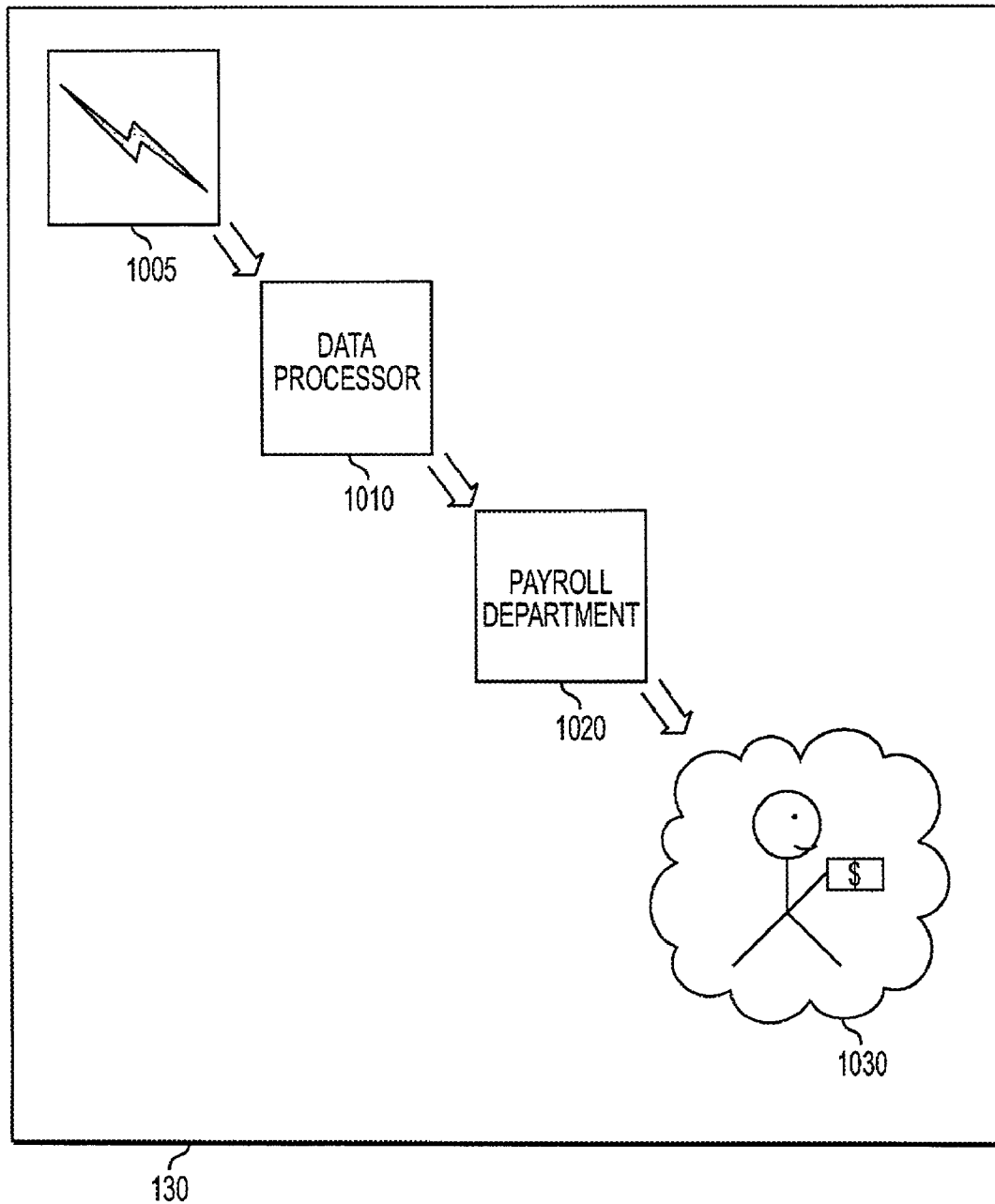


FIG. 10

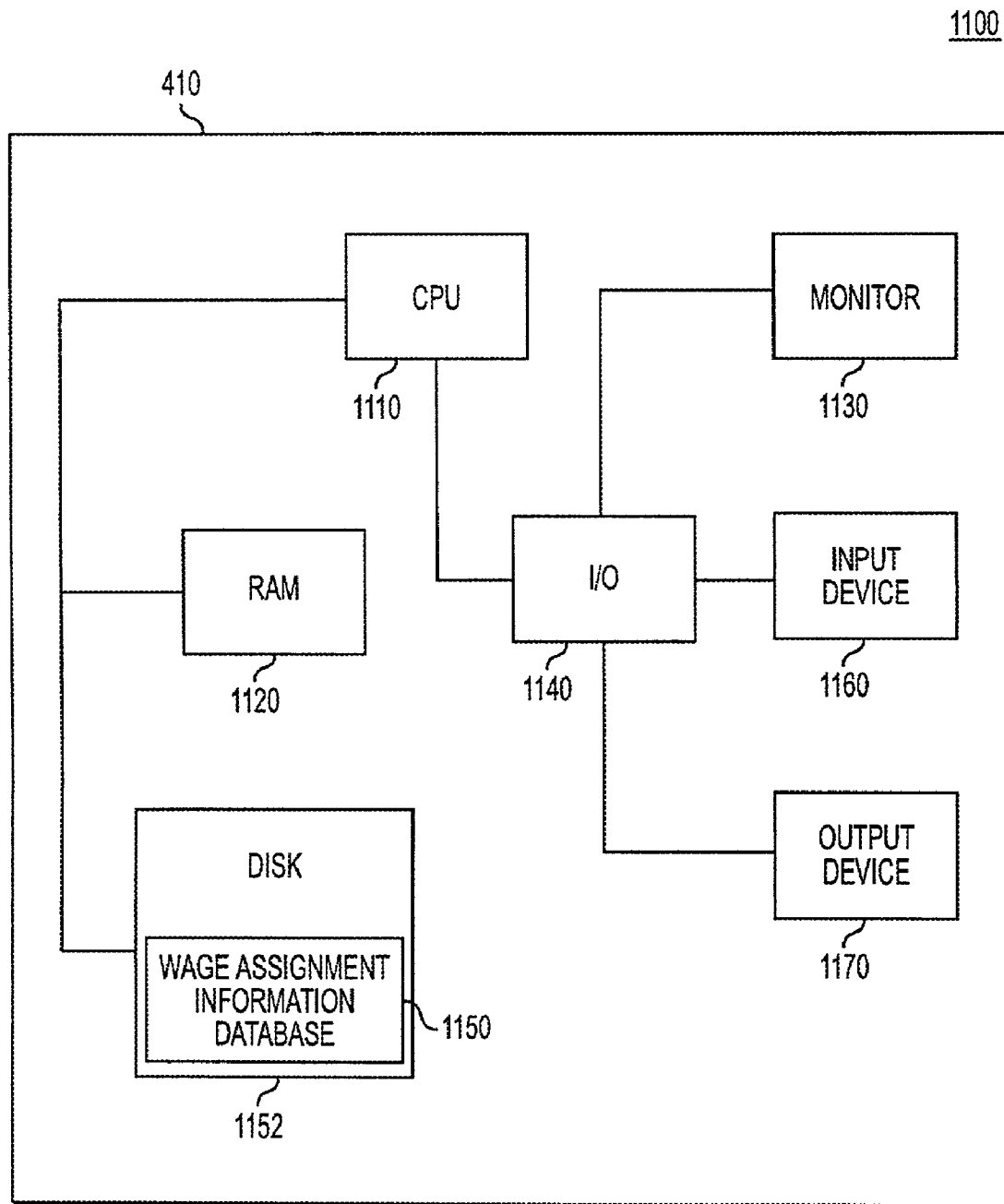


FIG. 11

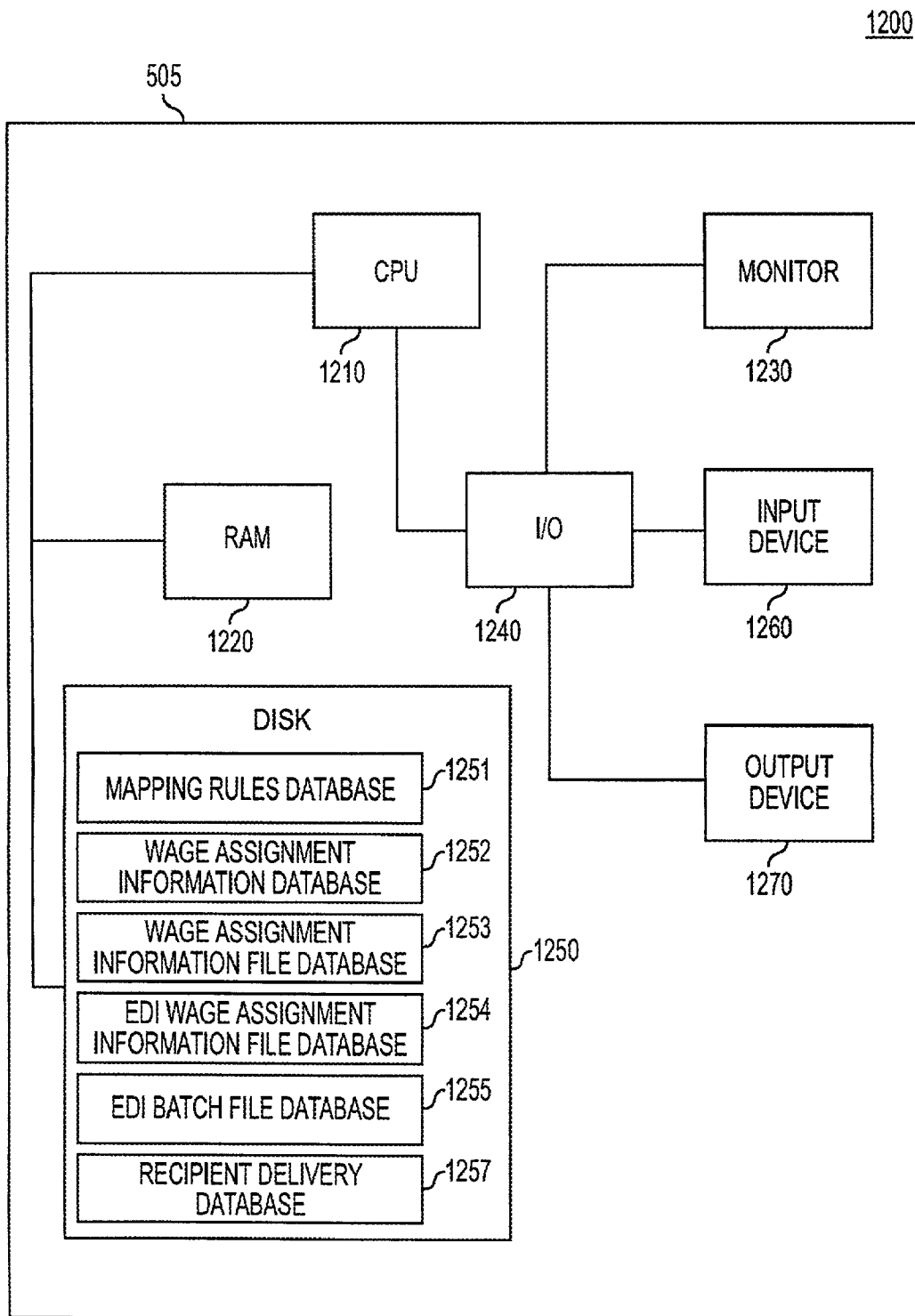


FIG. 12

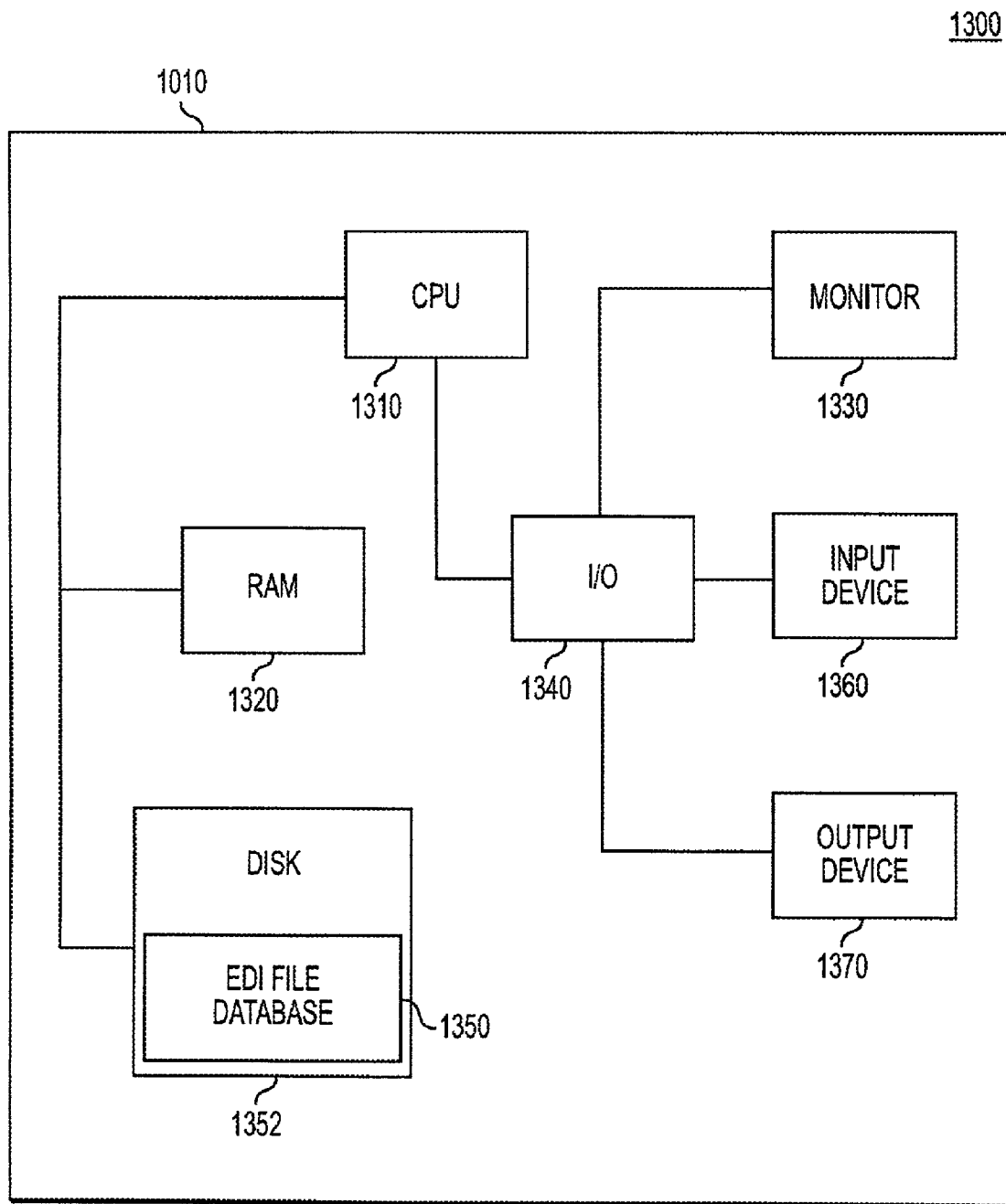


FIG. 13

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ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT																	
CO/CITY/DIST. OF _____ DATE OF ORDER/NOTICE _____ COURT/CASE NUMBER _____	ORIGINAL ORDER/NOTICE _____ AMENDED ORDER/NOTICE _____																
EMPLOYER/WITHHOLDER'S FEDERAL EIN NUMBER _____ EMPLOYER/WITHHOLDER'S NAME _____ EMPLOYER/WITHHOLDER'S ADDRESS _____ _____ _____ CHILD(REN)'S NAME(S): DOB _____	RE: _____ RE: EMPLOYER/OBLIGOR'S (LAST, FIRST, MI) _____ RE: EMPLOYER/OBLIGOR'S SOCIAL SECURITY NUMBER _____ RE: EMPLOYER/OBLIGOR'S CASE IDENTIFIER _____ RE: CUSTODIAL PARENT'S (LAST, FIRST, MI) _____ CHILD(REN)'S NAME(S): DOB _____																
<p>ORDER INFORMATION: THIS IS AN ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT BASED UPON AN ORDER FOR SUPPORT FROM _____. BY LAW, YOU ARE REQUIRED TO DEDUCT THESE AMOUNTS FROM THE ABOVE-NAMED EMPLOYEE/OBLIGATOR'S INCOME UNTIL _____ EVEN IF THE ORDER/NOTICE IS NOT ISSUED BY YOUR STATE.</p> <p><input type="checkbox"/> IF CHECKED, YOU ARE REQUIRED TO ENROLL THE CHILD(REN) IDENTIFIED ABOVE IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THROUGH THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT. _____</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">\$ _____</td> <td style="width: 10%;">PER _____</td> <td style="width: 80%;">IN CURRENT SUPPORT</td> </tr> <tr> <td>\$ _____</td> <td>PER _____</td> <td>IN PAST-DUE SUPPORT</td> </tr> <tr> <td>\$ _____</td> <td>PER _____</td> <td>MEDICAL SUPPORT</td> </tr> <tr> <td>\$ _____</td> <td>PER _____</td> <td>IN OTHER (SPECIFY) _____</td> </tr> </table> <p>FOR A TOTAL OF _____ PER _____ TO BE FORWARDED TO THE PAYEE BELOW.</p> <p>YOU DO NOT HAVE TO VARY YOUR PAY CYCLE TO BE IN COMPLIANCE WITH THE SUPPORT ORDER. IF YOUR PAY CYCLE DOES NOT MATCH THE ORDERED SUPPORT PAYMENT CYCLE, USE THE FOLLOWING TO DETERMINE HOW MUCH TO WITHHOLD:</p> <table style="width: 100%;"> <tr> <td style="width: 50%;">\$ _____ PER WEEKLY PAY PERIOD.</td> <td style="width: 50%;">\$ _____ PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).</td> </tr> <tr> <td>\$ _____ PER BIWEEKLY PAY PERIOD (EVERY TWO WEEKS).</td> <td>\$ _____ PER MONTHLY PAY PERIOD.</td> </tr> </table> <p>REMITTANCE INFORMATION: FOLLOW THE LAWS AND PROCEDURES OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT EVEN IF SUCH LAWS AND PROCEDURES ARE DIFFERENT FROM THE PARAGRAPH:</p>		\$ _____	PER _____	IN CURRENT SUPPORT	\$ _____	PER _____	IN PAST-DUE SUPPORT	\$ _____	PER _____	MEDICAL SUPPORT	\$ _____	PER _____	IN OTHER (SPECIFY) _____	\$ _____ PER WEEKLY PAY PERIOD.	\$ _____ PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).	\$ _____ PER BIWEEKLY PAY PERIOD (EVERY TWO WEEKS).	\$ _____ PER MONTHLY PAY PERIOD.
\$ _____	PER _____	IN CURRENT SUPPORT															
\$ _____	PER _____	IN PAST-DUE SUPPORT															
\$ _____	PER _____	MEDICAL SUPPORT															
\$ _____	PER _____	IN OTHER (SPECIFY) _____															
\$ _____ PER WEEKLY PAY PERIOD.	\$ _____ PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).																
\$ _____ PER BIWEEKLY PAY PERIOD (EVERY TWO WEEKS).	\$ _____ PER MONTHLY PAY PERIOD.																

FIG. 14A
(PRIOR ART)

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YOU MUST BEGIN WITHHOLDING NO LATER THAN THE FIRST PAY PERIOD OCCURRING AFTER _____ WORKING DAYS AFTER THE DATE OF THIS ORDER/NOTICE. SEND PAYMENT WITHIN _____ WORKING DAYS OF THE PAYDATE/ DATE OF WITHHOLDING. YOU ARE ENTITLED TO DEDUCT A FEE OF _____ TO DEFRAY THE COST OF WITHHOLDING. THE TOTAL WITHHELD AMOUNT, INCLUDING YOUR FEE, CANNOT EXCEED _____% OF THE EMPLOYEE/ OBLIGOR'S AGGREGATE DISPOSABLE WEEKLY EARNINGS. FOR THE PURPOSE OF THE LIMITATION ON WITHHOLDING, THE FOLLOWING INFORMATION IS NEEDED (SEE #9 ON BACK):

ARREARS 12 WEEKS OR GREATER? ☐ YES ☐ NO EMPLOYEE/OBLIGOR SUPPORTS A SECOND FAMILY? ☐ YES ☐ NO

WHEN REMITTING PAYMENT PROVIDE THE PAYDATE/DATE OF WITHHOLDING AND THE CASE IDENTIFIER _____. IF REMITTED BY EFT/EDI, USE THE FIPS CODE: _____; BANK ROUTING CODE: _____. BANK ACCOUNT NUMBER: _____.

MAKE IT PAYABLE TO: _____

AUTHORIZED BY _____
PRINT NAME _____

SEND CHECK TO: _____

FIG. 14A (CONT)
(PRIOR ART)

U.S. Patent**Jul. 4, 2006****Sheet 17 of 46****US 7,072,909 B2**1400**ADDITIONAL INFORMATION TO EMPLOYERS AND OTHER WITHHOLDERS**

☐ IF CHECKED YOU ARE REQUIRED TO PROVIDE A COPY OF THIS FORM TO YOUR EMPLOYEE.

1. PRIORITY: WITHHOLDING UNDER THIS ORDER/NOTICE HAS PRIORITY OVER ANY OTHER LEGAL PROCESS UNDER STATE LAW AGAINST THE SAME INCOME. FEDERAL TAX LEVIES IN EFFECT BEFORE RECEIPT OF THIS ORDER HAVE PRIORITY UNLESS OTHERWISE AGREED TO BY IRS.
2. COMBINING PAYMENTS: YOU CAN COMBINE WITHHELD AMOUNTS FROM MORE THAN ONE EMPLOYEE/OBLIGOR'S INCOME IN A SINGLE PAYMENT TO EACH AGENCY REQUESTING WITHHOLDING. YOU MUST, HOWEVER, SEPARATELY IDENTIFY THE PORTION OF THE SINGLE PAYMENT THAT IS ATTRIBUTABLE TO EACH EMPLOYEE/OBLIGOR.
3. REPORTING THE PAYDATE/DATE OF WITHHOLDING: YOU MUST REPORT THE PAYDATE OF WITHHOLDING WHEN SENDING THE PAYMENT. THE PAYDATE/DATE OF WITHHOLDING IS THE DATE ON WHICH THE EMPLOYEE IS PAID AND CONTROLS THE INCOME (THE DATE THE INCOME CHECK OR CASH IS GIVEN TO THE EMPLOYEE, OR THE DATE IN WHICH THE INCOME IS DEPOSITED DIRECTLY IN HIS/HER ACCOUNT).
4. EMPLOYEE/OBLIGOR WITH MULTIPLE SUPPORT WITHHOLDINGS: IF THERE IS MORE THAN ONE ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT AGAINST THIS EMPLOYEE/OBLIGOR AND YOU ARE UNABLE TO HONOR ALL SUPPORT ORDERS/NOTICES DUE TO FEDERAL OR STATE WITHHOLDING LIMITS, YOU MUST IMMEDIATELY CONTACT THE AGENCY THAT SENT THE MOST RECENT ORDER/NOTICE TO DETERMINE HOW TO DIVIDE THE WITHHELD INCOME. CONTINUE WITHHOLDING BY HONORING CURRENT SUPPORT ORDER FIRST. THE LAW OF EMPLOYEE'S PRINCIPAL PLACE OF EMPLOYMENT WILL GOVERN ALLOCATION.
5. TERMINATION NOTIFICATION: YOU MUST PROMPTLY NOTIFY THE PAYEE WHEN THE EMPLOYEE/OBLIGOR NO LONGER WORKS FOR YOU. PLEASE PROVIDE THE INFORMATION REQUESTED AND RETURN A COPY OF THIS ORDER/NOTICE TO THE AGENCY IDENTIFIED BELOW.
 DATE OF SEPERATION _____
 LAST KNOWN HOME ADDRESS _____
 NEW EMPLOYER'S ADDRESS _____
6. LUMP SUM PAYMENTS: YOU MAY BE REQUIRED TO REPORT AND WITHHOLD FROM LUMP SUM PAYMENTS SUCH AS BONUSES, COMMISSIONS, OR SEVERANCE PAY. IF YOU HAVE ANY QUESTIONS ABOUT LUMP SUM PAYMENTS, CONTACT THE PERSON OF AUTHORITY BELOW.
7. LIABILITY: IF YOU FAIL TO WITHHOLD INCOME AS THE ORDER/NOTICE DIRECTS, YOU ARE LIABLE FOR BOTH THE ACCUMULATED AMOUNT YOU SHOULD HAVE WITHHELD FROM THE EMPLOYEE/OBLIGOR'S INCOME AND ANY OTHER PENALTIES SET BY STATE LAW.

FIG. 14B
(PRIOR ART)

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8. ANTI-DISCRIMINATION: YOU ARE SUBJECT TO A FINE DETERMINED UNDER STATE LAW FOR DISCHARGING AN EMPLOYEE/ OBLIGOR FROM EMPLOYMENT, REFUSING TO EMPLOYEE, OR TAKING DISCIPLINARY ACTION AGAINST ANY EMPLOYEE/ OBLIGOR BECAUSE OF A CHILD SUPPORT WITHHOLDING.

9. WITHHOLDING LIMITS: YOU MAY NOT WITHHOLD MORE THAN THE LESSER OF: 1) THE AMOUNT ALLOWED BY THE FEDERAL CONSUMER CREDIT PROTECTION ACT (15 U.S.C. § 1673 (b)); OR 2) THE AMOUNTS ALLOWED BY THE STATE OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT. THE FEDERAL LIMIT APPLIES TO THE AGGREGATE DISPOSABLE WEEKLY EARNINGS (ADWE). ADWE IS THE NET INCOME LEFT AFTER MAKING MANDATORY DEDUCTIONS SUCH AS: STATE, FEDERAL, LOCAL TAXES; SOCIAL SECURITY TAXES; AND MEDICARE TAXES. THE FEDERAL CCPA LIMIT IS 50% OF THE ADWE FOR CHILD SUPPORT AND ALIMONY, WHICH IS INCREASED BY: 1) 10% IF THE EMPLOYEE DOES NOT SUPPORT A SECOND FAMILY; AND/OR 2) 5% IF ARREARS ARE MORE THAN 12 WEEKS OLD, (SEE BOXES ON FRONT)

10. _____
- _____
- _____
- _____

REQUESTING AGENCY _____

IF YOU OR YOUR EMPLOYEE/OBLIGOR HAVE ANY QUESTIONS, CONTACT:

BY TELEPHONE AT _____ OR

BY FAX AT _____

FIG. 14B (CONT)
(PRIOR ART)

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ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT	
VIRGINIA CO./CITY/DIST. OF <u>ALEXANDRIA</u> DATE OF ORDER/NOTICE <u>6/12/98</u> COURT/CASE NUMBER <u>98-123</u>	ORIGINAL ORDER/NOTICE AMENDED ORDER/NOTICE
<u>432165</u> EMPLOYER/WITHHOLDER'S FEDERAL EIN NUMBER <u>Y CORP.</u> EMPLOYER/WITHHOLDER'S NAME <u>123 MAIN STREET</u> EMPLOYER/WITHHOLDER'S ADDRESS <u>ANYTOWN, VA</u> <div style="text-align: right;"><u>12345-0000</u></div>	RE: <u>DOE, JOHN</u> EMPLOYER/OBLIGOR'S (LAST, FIRST, MI) RE: <u>123-45-6789</u> EMPLOYER/OBLIGOR'S SOCIAL SECURITY NUMBER RE: <u>98-123</u> EMPLOYER/OBLIGOR'S CASE IDENTIFIER RE: <u>DOE, JANE</u> CUSTODIAL PARENT'S (LAST, FIRST, MI)
CHILD(REN)'S NAME(S): <u>DOB</u> <u>DOE, SUSIE 6/1/1990</u>	CHILD(REN)'S NAME(S): <u>DOB</u>

ORDER INFORMATION: THIS IS AN ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT BASED UPON AN ORDER FOR SUPPORT FROM VIRGINIA. BY LAW, YOU ARE REQUIRED TO DEDUCT THESE AMOUNTS FROM THE ABOVE-NAMED EMPLOYEE/OBLIGATOR'S INCOME UNTIL 6/1/2008 EVEN IF THE ORDER/NOTICE IS NOT ISSUED BY YOUR STATE.

☐ IF CHECKED, YOU ARE REQUIRED TO ENROLL THE CHILD(REN) IDENTIFIED ABOVE IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THROUGH THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT.

\$ <u>800.00</u>	PER	<u>MONTH</u>	IN CURRENT SUPPORT
\$	PER		IN PAST-DUE SUPPORT
\$ <u>100.00</u>	PER	<u>MONTH</u>	MEDICAL SUPPORT
\$	PER		IN OTHER (SPECIFY) _____

FOR A TOTAL OF \$900.00 PER MONTH TO BE FORWARDED TO THE PAYEE BELOW.

YOU DO NOT HAVE TO VARY YOUR PAY CYCLE TO BE IN COMPLIANCE WITH THE SUPPORT ORDER. IF YOUR PAY CYCLE DOES NOT MATCH THE ORDERED SUPPORT PAYMENT CYCLE, USE THE FOLLOWING TO DETERMINE HOW MUCH TO WITHHOLD:

\$ <u>207.00</u> PER WEEKLY PAY PERIOD.	\$ <u>450.00</u> PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).
\$ <u>414.00</u> PER BIWEEKLY PAY PERIOD. (EVERY TWO WEEKS).	\$ <u>900.00</u> PER MONTHLY PAY PERIOD.

REMITTANCE INFORMATION: FOLLOW THE LAWS AND PROCEDURES OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT EVEN IF SUCH LAWS AND PROCEDURES ARE DIFFERENT FROM THE PARAGRAPH:

FIG. 15A

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YOU MUST BEGIN WITHHOLDING NO LATER THAN THE FIRST PAY PERIOD OCCURRING AFTER 30 WORKING DAYS AFTER THE DATE OF THIS ORDER/NOTICE. SEND PAYMENT WITHIN 7 WORKING DAYS OF THE PAYDATE/ DATE OF WITHHOLDING. YOU ARE ENTITLED TO DEDUCT A FEE OF \$50.00 TO DEFRAY THE COST OF WITHHOLDING. THE TOTAL WITHHELD AMOUNT, INCLUDING YOUR FEE, CANNOT EXCEED 40 % OF THE EMPLOYEE/ OBLIGOR'S AGGREGATE DISPOSABLE WEEKLY EARNINGS. FOR THE PURPOSE OF THE LIMITATION OF ON WITHHOLDING, THE FOLLOWING INFORMATION IS NEEDED (SEE #9 ON BACK):

ARREARS 12 WEEKS OR GREATER? ☐ YES ☒ NO EMPLOYEE/OBLIGOR SUPPORTS A SECOND FAMILY? ☐ YES ☒ NO

WHEN REMITTING PAYMENT PROVIDE THE PAYDATE/DATE OF WITHHOLDING AND THE CASE IDENTIFIER 98-123. IF
REMITTED BY EFT/EDI, USE THE FIPS CODE: 54321; BANK ROUTING CODE: 98765. BANK ACCOUNT
NUMBER: 4321.

MAKE IT PAYABLE TO: JANE DOE

AUTHORIZED BY _____
PRINT NAME JUDGE BLACK ROBE

SEND CHECK TO: 456 MAIN STREET
ANYTOWN, VA
12345-0000

FIG. 15A (CONT)

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☐ IF CHECKED YOU ARE REQUIRED TO PROVIDE A COPY OF THIS FORM TO YOUR EMPLOYEE.

1. **PRIORITY: WITHHOLDING UNDER THIS ORDER/NOTICE HAS PRIORITY OVER ANY OTHER LEGAL PROCESS UNDER STATE LAW AGAINST THE SAME INCOME. FEDERAL TAX LEVIES IN EFFECT BEFORE RECEIPT OF THIS ORDER HAVE PRIORITY UNLESS OTHERWISE AGREED TO BY IRS.**
2. **COMBINING PAYMENTS: YOU CAN COMBINE WITHHELD AMOUNTS FROM MORE THAN ONE EMPLOYEE/OBLIGOR'S INCOME IN A SINGLE PAYMENT TO EACH AGENCY REQUESTING WITHHOLDING. YOU MUST, HOWEVER, SEPARATELY IDENTIFY THE PORTION OF THE SINGLE PAYMENT THAT IS ATTRIBUTABLE TO EACH EMPLOYEE/OBLIGOR.**
3. **REPORTING THE PAYDATE/DATE OF WITHHOLDING: YOU MUST REPORT THE PAYDATE OF WITHHOLDING WHEN SENDING THE PAYMENT. THE PAYDATE/DATE OF WITHHOLDING IS THE DATE ON WHICH THE EMPLOYEE IS PAID AND CONTROLS THE INCOME (THE DATE THE INCOME CHECK OR CASH IS GIVEN TO THE EMPLOYEE, OR THE DATE IN WHICH THE INCOME IS DEPOSITED DIRECTLY IN HIS/HER ACCOUNT).**
4. **EMPLOYEE/OBLIGOR WITH MULTIPLE SUPPORT WITHHOLDINGS: IF THERE IS MORE THAN ONE ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT AGAINST THIS EMPLOYEE/OBLIGOR AND YOU ARE UNABLE TO HONOR ALL SUPPORT ORDERS/NOTICES DUE TO FEDERAL OR STATE WITHHOLDING LIMITS, YOU MUST IMMEDIATELY CONTACT THE AGENCY THAT SENT THE MOST RECENT ORDER/NOTICE TO DETERMINE HOW TO DIVIDE THE WITHHELD INCOME. CONTINUE WITHHOLDING BY HONORING CURRENT SUPPORT ORDER FIRST. THE LAW OF EMPLOYEE'S PRINCIPAL PLACE OF EMPLOYMENT WILL GOVERN ALLOCATION.**
5. **TERMINATION NOTIFICATION: YOU MUST PROMPTLY NOTIFY THE PAYEE WHEN THE EMPLOYEE/OBLIGOR NO LONGER WORKS FOR YOU. PLEASE PROVIDE THE INFORMATION REQUESTED AND RETURN A COPY OF THIS ORDER/NOTICE TO THE AGENCY IDENTIFIED BELOW.**
 DATE OF SEPERATION _____
 LAST KNOWN HOME ADDRESS _____
 NEW EMPLOYER'S ADDRESS _____
6. **LUMP SUM PAYMENTS: YOU MAY BE REQUIRED TO REPORT AND WITHHOLD FROM LUMP SUM PAYMENTS SUCH AS BONUSES, COMMISSIONS, OR SEVERANCE PAY. IF YOU HAVE ANY QUESTIONS ABOUT LUMP SUM PAYMENTS, CONTACT THE PERSON OF AUTHORITY BELOW.**
7. **LIABILITY: IF YOU FAIL TO WITHHOLD INCOME AS THE ORDER/NOTICE DIRECTS, YOU ARE LIABLE FOR BOTH THE ACCUMULATED AMOUNT YOU SHOULD HAVE WITHHELD FROM THE EMPLOYEE/OBLIGOR'S INCOME AND ANY OTHER PENALTIES SET BY STATE LAW.**

FIG. 15B

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8. ANTI-DISCRIMINATION: YOU ARE SUBJECT TO A FINE DETERMINED UNDER STATE LAW FOR DISCHARGEING AN EMPLOYEE/ OBLIGOR FROM EMPLOYMENT, REFUSING TO EMPLOYEE, OR TAKING DISCIPLINARY ACTION AGAINST ANY EMPLOYEE/ OBLIGOR BECAUSE OF A CHILD SUPPORT WITHHOLDING.

9. WITHHOLDING LIMITS: YOU MAY NOT WITHHOLD MORE THAN THE LESSER OF: 1) THE AMOUNT ALLOWED BY THE FEDERAL CONSUMER CREDIT PROTECTION ACT (15 U.S.C. § 1673 (b)); OR 2) THE AMOUNTS ALLOWED BY STATE OF THE EMPLOYEE'S/ OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT. THE FEDERAL LIMIT APPLIES TO THE AGGREGATE DISPOSABLE WEEKLY EARNINGS (ADWE). ADWE IS THE NET INCOME LEFT AFTER MAKING MANDATORY DEDUCTIONS SUCH AS: STATE, FEDERAL, LOCAL TAXES; SOCIAL SECURITY TAXES; AND MEDICARE TAXES. THE FEDERAL CCPA LIMIT IS 50% OF THE ADWE FOR CHILD SUPPORT AND ALIMONY, WHICH IS INCREASED BY :) 1) 10% IF THE EMPLOYEE DOES NOT SUPPORT A SECOND FAMILY; AND/OR 2) 5% IF ARREARS ARE MORE THAN 12 WEEKS OLD, (SEE BOXES ON FRONT)

10. _____
- _____
- _____
- _____

REQUESTING AGENCY _____

VIRGINIA CHILD SUPPORT DEPARTMENT

IF YOU OR YOUR EMPLOYEE/OBLIGOR HAVE ANY QUESTIONS, CONTACT:

JOHN G. CLERK

BY TELEPHONE AT 703-123-4567 OR

BY FAX AT 703-123-4567

FIG. 15B (CONT)

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1	2	3	4	5	6	7	8	...	n
VIRGINIA	JOHN DOE	123-45-6789	Y CORP.	ANYTOWN	VA	12345-0000	98-123		6/12/98

1152

FIG. 16

1700

1	2	3	4	5	6	7	8	...	n
VIRGINIA	JOHN DOE	123-45-6789	Y CORP.	ANYTOWN	VA	12345-0000	98-123		6/12/98

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FIG. 17

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1800

1	2	3	4	5	6	7	8	9	...	n
I_1	VIRGINIA	JOHN DOE	123-45-6789	Y CORP.	ANYTOWN	VA	12345-0000	98-123		6/12/98
I_2	TENNESSEE	98-456	SOMETOWN	T. VOE	5321-0000	7/1/98	300-00-0001	X CORP.		TX
I_2	OHIO	98-789	ANYTOWN	S. ROE	98765-0000	6/21/98	200-00-0001	Y CORP.		VA

1253

FIG. 18

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ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT

CO./CITY/DIST. OF	1a	4a	ORIGINAL ORDER/NOTICE
DATE OF ORDER/NOTICE	1b	4b	AMENDED ORDER/NOTICE
COURT/CASE NUMBER	2		
	3		
5		RE:	7
EMPLOYER/WITHHOLDER'S FEDERAL EIN NUMBER			EMPLOYER/OBLIGOR'S (LAST, FIRST, MI)
6a		RE:	8
EMPLOYER/WITHHOLDER'S NAME			EMPLOYER/OBLIGOR'S SOCIAL SECURITY NUMBER
6b		RE:	9
EMPLOYER/WITHHOLDER'S ADDRESS			EMPLOYER/OBLIGOR'S CASE IDENTIFIER
6c		RE:	10
			CUSTODIAL PARENT'S (LAST, FIRST, MI)
6d			
6e			
CHILD(REN)'S NAME(S):	DOB	CHILD(REN)'S NAME(S):	DOB
11			

ORDER INFORMATION: THIS IS AN ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT BASED UPON AN ORDER FOR SUPPORT FROM 12. BY LAW, YOU ARE REQUIRED TO DEDUCT THESE AMOUNTS FROM THE ABOVE-NAMED EMPLOYEE/OBLIGOR'S INCOME UNTIL 13 EVEN IF THE ORDER/NOTICE IS NOT ISSUED BY YOUR STATE.

☐ IF CHECKED, YOU ARE REQUIRED TO ENROLL THE CHILD(REN) IDENTIFIED ABOVE IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THROUGH THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT. 14

\$ 15a	PER	15b	IN CURRENT SUPPORT
\$ 16a	PER	16b	IN PAST-DUE SUPPORT
\$ 17a	PER	17b	MEDICAL SUPPORT
\$ 18a	PER	18b	IN OTHER (SPECIFY) 18c
19a		19b	20

FOR A TOTAL OF 21a PER 21b TO BE FORWARDED TO THE PAYEE BELOW.

YOU DO NOT HAVE TO VARY YOUR PAY CYCLE TO BE IN COMPLIANCE WITH THE SUPPORT ORDER. IF YOUR PAY CYCLE DOES NOT MATCH THE ORDERED SUPPORT PAYMENT CYCLE, USE THE FOLLOWING TO DETERMINE HOW MUCH TO WITHHOLD:

\$ 22a	PER WEEKLY PAY PERIOD.	\$ 22c	PER SEMIMONTHLY PAY PERIOD (TWICE A MONTH).
\$ 22b	PER BIWEEKLY PAY PERIOD. (EVERY TWO WEEKS).	\$ 22d	PER MONTHLY PAY PERIOD.

REMITTANCE INFORMATION: FOLLOW THE LAWS AND PROCEDURES OF THE EMPLOYEE'S/OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT EVEN IF SUCH LAWS AND PROCEDURES ARE DIFFERENT FROM THE PARAGRAPH:

FIG. 19A
(PRIOR ART)

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YOU MUST BEGIN WITHHOLDING NO LATER THAN THE FIRST PAY PERIOD OCCURING AFTER 23 WORKING DAYS AFTER THE DATE OF THIS ORDER/NOTICE. SEND PAYMENT WITHIN 24 WORKING DAYS OF THE PAYDATE/ DATE OF WITHHOLDING. YOU ARE ENTITLED TO DEDUCT A FEE OF 25 TO DEFRAY THE COST OF WITHHOLDING. THE TOTAL WITHHELD AMOUNT, INCLUDING YOUR FEE, CANNOT EXCEED 26 % OF THE EMPLOYEE/ OBLIGOR'S AGGREGATE DISPOSABLE WEEKLY EARNINGS. FOR THE PURPOSE OF THE LIMITATION ON WITHHOLDING, THE FOLLOWING INFORMATION IS NEEDED (SEE #9 ON BACK):

(27a) ARREARS 12 WEEKS OR GREATER? ☐ YES ☐ NO (27b) EMPLOYEE/OBLIGOR SUPPORTS A SECOND FAMILY? ☐ YES ☐ NO

WHEN REMITTING PAYMENT PROVIDE THE PAYDATE/DATE OF WITHHOLDING AND THE CASE IDENTIFIER 28a. IF REMITTING BY EFT/EDI, USE THE FIPS CODE: 28b; BANK ROUTING CODE: 28c. BANK ACCOUNT NUMBER: 28d.

MAKE IT PAYABLE TO: 29a

AUTHORIZED BY 30a
PRINT NAME 30b

SEND CHECK TO: 29b

29c

29d

29e

FIG. 19A (CONT)
(PRIOR ART)

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☐ IF CHECKED YOU ARE REQUIRED TO PROVIDE A COPY OF THIS FORM TO YOUR EMPLOYEE.

1. PRIORITY: WITHHOLDING UNDER THIS ORDER/NOTICE HAS PRIORITY OVER ANY OTHER LEGAL PROCESS UNDER STATE LAW AGAINST THE SAME INCOME. FEDERAL TAX LEVIES IN EFFECT BEFORE RECEIPT OF THIS ORDER HAVE PRIORITY UNLESS OTHERWISE AGREED TO BY IRS.
2. COMBINING PAYMENTS: YOU CAN COMBINE WITHHELD AMOUNTS FROM MORE THAN ONE EMPLOYEE/OBLIGOR'S INCOME IN A SINGLE PAYMENT TO EACH AGENCY REQUESTING WITHHOLDING. YOU MUST, HOWEVER, SEPARATELY IDENTIFY THE PORTION OF THE SINGLE PAYMENT THAT IS ATTRIBUTABLE TO EACH EMPLOYEE/OBLIGOR.
3. REPORTING THE PAYDATE/DATE OF WITHHOLDING: YOU MUST REPORT THE PAYDATE OF WITHHOLDING WHEN SENDING THE PAYMENT. THE PAYDATE/DATE OF WITHHOLDING IS THE DATE ON WHICH THE EMPLOYEE IS PAID AND CONTROLS THE INCOME (THE DATE THE INCOME CHECK OR CASH IS GIVEN TO THE EMPLOYEE, OR THE DATE IN WHICH THE INCOME IS DEPOSITED DIRECTLY IN HIS/HER ACCOUNT).
4. EMPLOYEE/OBLIGOR WITH MULTIPLE SUPPORT WITHHOLDINGS: IF THERE IS MORE THAN ONE ORDER/NOTICE TO WITHHOLD INCOME FOR CHILD SUPPORT AGAINST THIS EMPLOYEE/OBLIGOR AND YOU ARE UNABLE TO HONOR ALL SUPPORT ORDERS/NOTICES DUE TO FEDERAL OR STATE WITHHOLDING LIMITS, YOU MUST IMMEDIATELY CONTACT THE AGENCY THAT SENT THE MOST RECENT ORDER/NOTICE TO DETERMINE HOW TO DIVIDE THE WITHHELD INCOME. CONTINUE WITHHOLDING BY HONORING CURRENT SUPPORT ORDER FIRST. THE LAW OF EMPLOYEE'S PRINCIPAL PLACE OF EMPLOYMENT WILL GOVERN ALLOCATION.
5. TERMINATION NOTIFICATION: YOU MUST PROMPTLY NOTIFY THE PAYEE WHEN THE EMPLOYEE/OBLIGOR NO LONGER WORKS FOR YOU. PLEASE PROVIDE THE INFORMATION REQUESTED AND RETURN A COPY OF THIS ORDER/NOTICE TO THE AGENCY IDENTIFIED BELOW.
 DATE OF SEPERATION _____
 LAST KNOWN HOME ADDRESS _____
 NEW EMPLOYER'S ADDRESS _____
6. LUMP SUM PAYMENTS: YOU MAY BE REQUIRED TO REPORT AND WITHHOLD FROM LUMP SUM PAYMENTS SUCH AS BONUSES, COMMISSIONS, OR SEVERANCE PAY. IF YOU HAVE ANY QUESTIONS ABOUT LUMP SUM PAYMENTS, CONTACT THE PERSON OF AUTHORITY BELOW.
7. LIABILITY: IF YOU FAIL TO WITHHOLD INCOME AS THE ORDER/NOTICE DIRECTS, YOU ARE LIABLE FOR BOTH THE ACCUMULATED AMOUNT YOU SHOULD HAVE WITHHELD FROM THE EMPLOYEE/OBLIGOR'S INCOME AND ANY OTHER PENALTIES SET BY STATE LAW.

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FIG. 19B
(PRIOR ART)

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8. ANTI-DISCRIMINATION: YOU ARE SUBJECT TO A FINE DETERMINED UNDER STATE LAW FOR DISCHARGEING AN EMPLOYEE/ OBLIGOR FROM EMPLOYMENT, REFUSING TO EMPLOYEE, OR TAKING DISCIPLINARY ACTION AGAINST ANY EMPLOYEE/ OBLIGOR BECAUSE OF A CHILD SUPPORT WITHHOLDING.

33

9. WITHHOLDING LIMITS: YOU MAY NOT WITHHOLD MORE THAN THE LESSER OF: 1) THE AMOUNT ALLOWED BY THE FEDERAL CONSUMER CREDIT PROTECTION ACT (15 U.S.C. § 1673 (b)); OR 2) THE AMOUNTS ALLOWED BY STATE OF THE EMPLOYEE'S/ OBLIGOR'S PRINCIPAL PLACE OF EMPLOYMENT. THE FEDERAL LIMIT APPLIES TO THE AGGREGATE DISPOSABLE WEEKLY EARNINGS (ADWE). ADWE IS THE NET INCOME LEFT AFTER MAKING MANDATORY DEDUCTIONS SUCH AS: STATE, FEDERAL, LOCAL TAXES; SOCIAL SECURITY TAXES; AND MEDICARE TAXES. THE FEDERAL CCPA LIMIT IS 50% OF THE ADWE FOR CHILD SUPPORT AND ALIMONY, WHICH IS INCREASED BY: 1) 10% IF THE EMPLOYEE DOES NOT SUPPORT A SECOND FAMILY; AND/OR 2) 5% IF ARREARS ARE MORE THAN 12 WEEKS OLD, (SEE BOXES ON FRONT)

10. 34

REQUESTING AGENCY	35a	IF YOU OR YOUR EMPLOYEE/OBLIGOR HAVE ANY QUESTIONS, CONTACT:
	35b	36a
	35c	36b
	35d	BY TELEPHONE AT 36c OR
	35e	BY FAX AT 36d

FIG. 19B (CONT)
(PRIOR ART)

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#	CONTENTS
1a	NAME OF YOUR STATE.
1b	NAME OF YOUR JURISDICTION.
2	DATE THE ORDER/NOTICE TO WITHHOLD IS TO BE MAILED.
3	IDENTIFYING NUMBER USED BY THE COURT/AGENCY ISSUING THIS ORDER/NOTICE, IF APPROPRIATE.
4a-b	CHECK THE APPROPRIATE CASE STATUS OF THE ORDER/NOTICE TO WITHHOLD.
5	EMPLOYER/WITHOLDER'S NINE DIGIT FEDERAL EMPLOYER IDENTIFICATION NUMBER (IF AVAILABLE). INCLUDE THREE DIGIT LOCATION CODE (IF KNOWN).
6a	EMPLOYER/WITHOLDER'S NAME.
6b-e	EMPLOYER/WITHOLDER'S MAILING ADDRESS. (THIS MAY DIFFER FROM THE EMPLOYEE/OBLIGOR WORK SITE.)
7	EMPLOYEE/OBLIGOR'S LAST NAME, FIRST NAME, AND MIDDLE INITIAL (IF KNOWN).
8	EMPLOYEE/OBLIGOR'S SOCIAL SECURITY NUMBER.
9	CASE IDENTIFIER (OR OTHER IDENTIFIER) USED FOR RECORDING THE PAYMENT. (MAY BE THE SAME AS #3).
10	CUSTODIAL PARENT'S LAST NAME, FIRST NAME, AND MIDDLE INITIAL (IF KNOWN).
11	CHILD(REN)'S NAME(S) AND DATE OF BIRTH LISTED IN THE SUPPORT ORDER.
12	NAME OF STATE THAT ISSUED THE UNDERLYING CHILD SUPPORT ORDER.
13	TERMINATION DATE OF THE SUPPORT ORDER.
14	CHECK IF THE CHILD SUPPORT ORDER REQUIRES ENROLLMENT OF THE CHILD(REN) IN ANY HEALTH INSURANCE COVERAGE AVAILABLE THE EMPLOYEE'S/OBLIGOR'S EMPLOYMENT.

FIG. 19C
(PRIOR ART)

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15a	DOLLAR AMOUNT TO BE WITHHELD FOR PAYMENT OF CURRENT CHILD SUPPORT.
15b	TIME PERIOD THAT CORRESPONDS TO THE AMOUNT IN #15a (E.G., MONTH).
16a	DOLLAR AMOUNT TO BE WITHHELD FOR PAYMENT OF PAST-DUE CHILD SUPPORT UNDER YOUR STATE LAW.
16b	TIME PERIOD THAT CORRESPONDS TO THE AMOUNT IN #16a (E.G., MONTH).
17a	DOLLAR AMOUNT TO BE WITHHELD FOR PAYMENT OF MEDICAL SUPPORT, AS APPROPRIATE, BASED ON THE UNDERLYING ORDER.
19b	DESCRIBE THE AMOUNT(S) REPRESENTED IN #19a SEPARATELY BY FEE TYPE (E.G., COURT FEES).
20	ADDITIONAL SPACE PROVIDED FOR MISCELLANEOUS OBLIGATIONS, IF APPROPRIATE.
21a	TOTAL OF #15a, #16a, #17a, #18a, #19a, AND #20.
21b	TIME PERIOD THAT CORRESPONDS TO THE AMOUNT IN #15b (E.G., MONTH).
22a	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE IS PAID WEEKLY.
22b	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE IS PAID EVERY TWO WEEKS.
22c	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE IS PAID TWICE A MONTH.
22d	AMOUNT AN EMPLOYER WITHHOLDS IF THE EMPLOYEE [IS PAID] ONCE A MONTH.

FIG. 19D
(PRIOR ART)

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23	NUMBER OF DAYS IN WHICH THE WITHOLDING MUST BEGIN PURSUANT TO THE LAW OF YOUR STATE.
24	NUMBER OF WORKING DAYS AN EMPLOYER OR OTHER PAYOR OF INCOME MUST REMIT AMOUNTS WITHHELD PURSUANT TO THE LAW OF YOUR STATE.
25	AMOUNT OR PERCENTAGE THAT AN EMPLOYER OR OTHER PAYOR OF INCOME MAY DEDUCT IN ADDITION TO CHILD SUPPORT FROM ITS PAYMENT AS A FEE FOR WITHOLDING CHILD SUPPORT PURSUANT TO THE LAW OF YOUR STATE. IF YOUR STATE DOES NOT PERMIT DEDUCTION OF A FEE, ENTER 0. EMPLOYERS WITH EMPLOYEES/OBLIGORS LOCATED IN ANOTHER STATE SHOULD KNOW THOSE STATE LAWS.
28a	CASE IDENTIFIER OR OTHER IDENTIFIER. (MAY BE THE SAME AS #3 AND/OR #9).
28b	FEDERAL INFORMATION PROCESS STANDARD (FIPS) CODE FOR TRANSMITTING PAYMENTS THROUGH EFT/EDI. THE FIPS CODE IS FIVE CHARACTERS THAT IDENTIFIES THE STATE AND COUNTY. IT IS SEVEN CHARACTERS WHEN IT IDENTIFIES THE STATE, COUNTY, AND A LOCATION WITHIN THE COUNTY. IT IS NECESSARY FOR CENTRALIZED COLLECTIONS. COMPLETE ONLY FOR EFT/EDI TRANSMISSION.
28c	RECEIVING AGENCY'S BANK ROUTING NUMBER. COMPLETE ONLY FOR EFT/EDI TRANSMISSION.
28d	RECEIVING AGENCY'S BANK ACCOUNT NUMBER. COMPLETE ONLY FOR EFT/EDI TRANSMISSION.

FIG. 19E
(PRIOR ART)

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29a	NAME OF THE CHILD SUPPORT ENFORCEMENT AGENCY TO WHICH PAYMENTS ARE MADE AND THE CASE IDENTIFIER ON THE PAYMENT LINE.
29b-e	STREET ADDRESS, CITY, AND STATE OF THE CHILD SUPPORT ENFORCEMENT AGENCY IDENTIFIED IN #29a.
30a	SIGNATURE OF OFFICIAL(S) AUTHORIZED TO SEND THE ORDER/NOTICE. THIS LINE IS OPTIONAL IF A SIGNATURE IS NOT REQUIRED BY STATE STATUTE.
30b	PRINT NAME OF THE OFFICIAL(S) AUTHORIZED TO SEND THE ORDER/NOTICE.
31	CHECK THE BOX IF THE EMPLOYER IS TO PROVIDE A COPY OF THE ORDER/NOTICE TO THE EMPLOYEE.
32	PENALTY AND YOUR STATE CITATION FOR AN EMPLOYER WHO FAILS TO COMPLY WITH THE ORDER/NOTICE. YOUR STATE LAW GOVERNS UNLESS THE OBLIGOR IS EMPLOYED IN ANOTHER STATE, IN WHICH CASE THE LAW OF THE STATE IN WHICH HE OR SHE IS EMPLOYED GOVERNS.
36d	FACSIMILE NUMBER FOR THE PERSON WHOSE NAME APPEARS IN #36a.

FIG. 19F
(PRIOR ART)

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#	I_1	I_2	I_2	• • •
1a	VA	TX	VA	
1b	ANYTOWN	SOMETOWN	ANYTOWN	
2	6/12/98	7/1/98	6/21/98	
3	98-123	98-456	98-789	
⋮				
6a	Y CORP.	X CORP.	Y CORP.	
⋮				
36d				

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FIG. 20

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RECIPIENT	1a	1b	2	3	• • •	36d
Y CORP.	VA	ANYTOWN	6/12/98	98-123		
Y CORP.	VA	ANYTOWN	7/4/98	98-761		
X CORP.	TX	SOMETOWN	7/1/98	98-456		
• • •						

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FIG. 21

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RECIPIENT	FTP	INTERNET	TAPE	DISKETTE	• • •	n
X CORP.	Y	X	X	Y		
Y CORP.	X	X	Y	X		

1257

FIG. 22

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RECIPIENT	1a	1b	2	3	• • •	36d
Y CORP.	VA	ANYTOWN	6/12/98	98-123		
Y CORP.	VA	ANYTOWN	7/4/98	98-761		

910

FIG. 23

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RECIPIENT	1a	1b	2	3	• • •	36d
Y CORP.	VA	ANYTOWN	6/12/98	98-123		
Y CORP.	VA	ANYTOWN	7/4/98	98-761		

1352

FIG. 24

2500

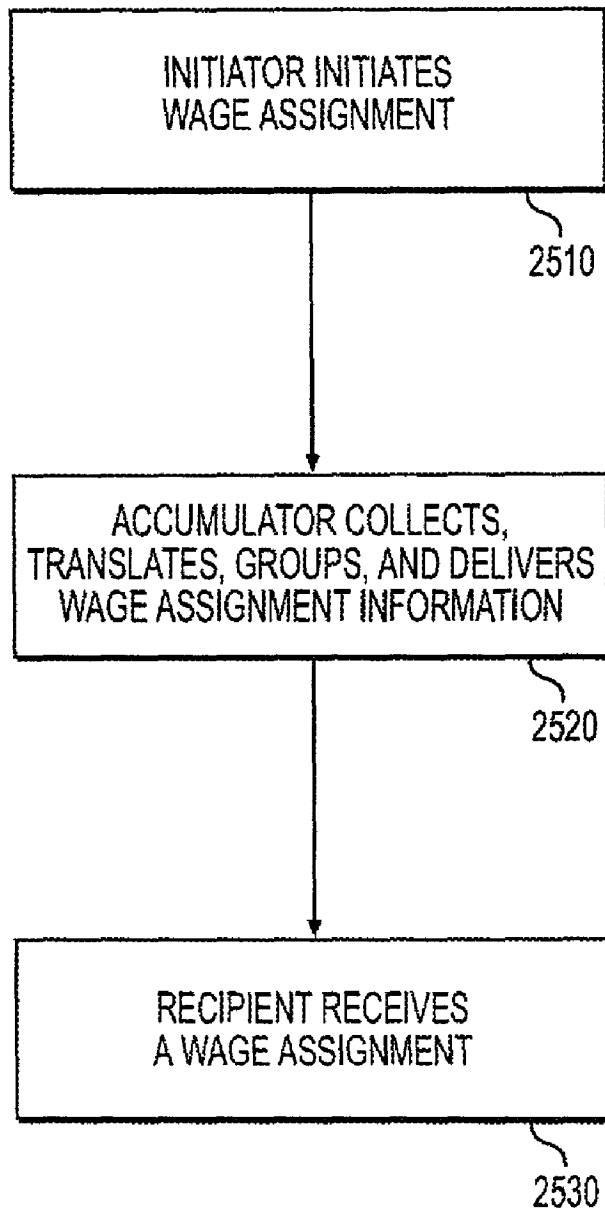


FIG. 25

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2600

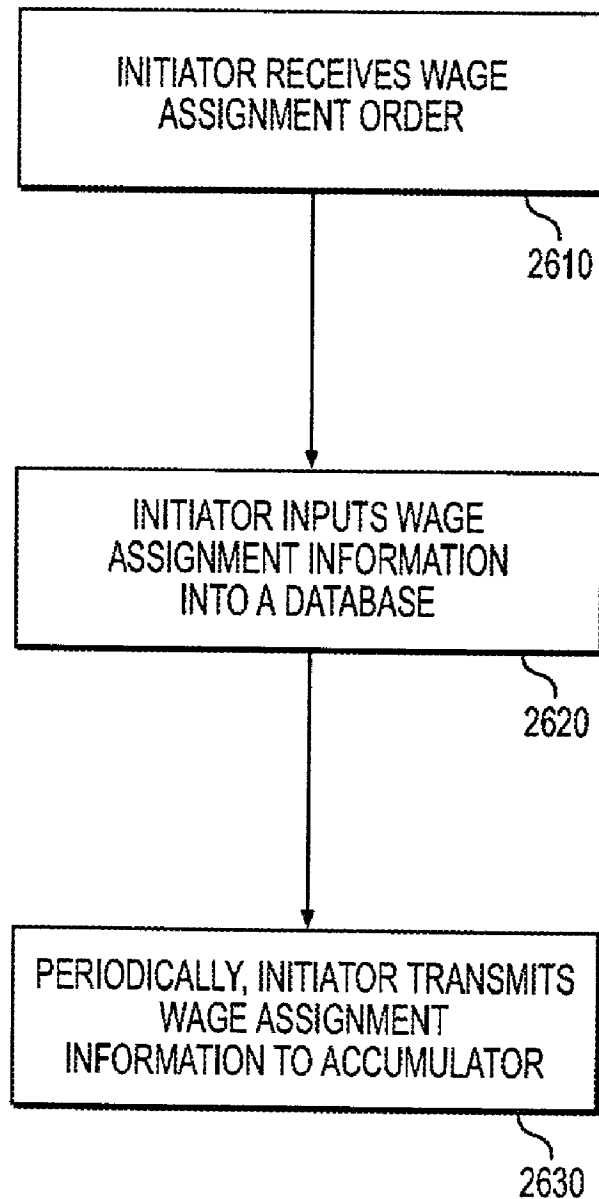


FIG. 26

2700

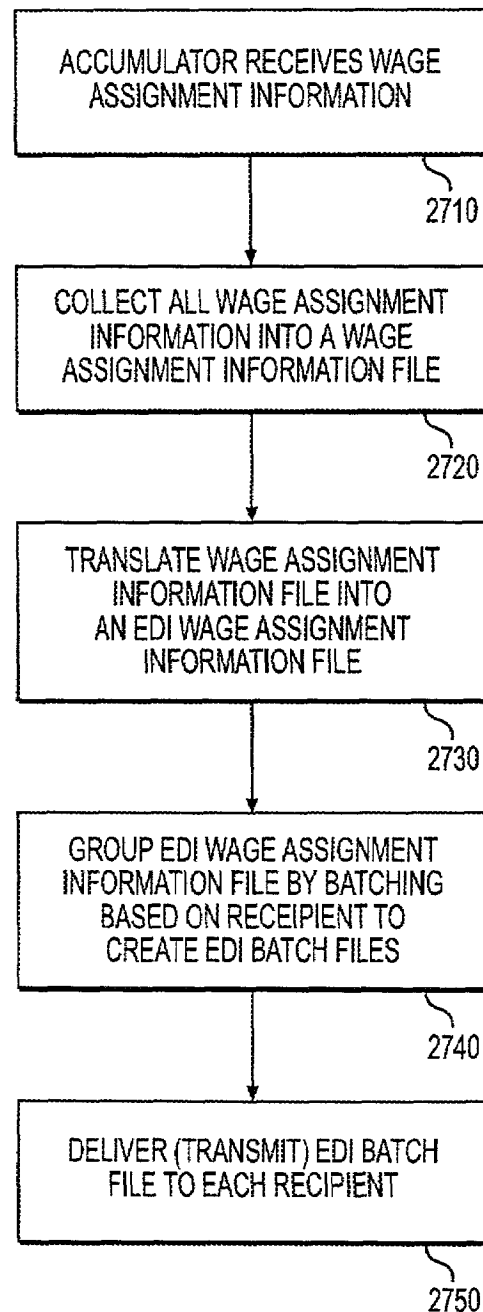


FIG. 27

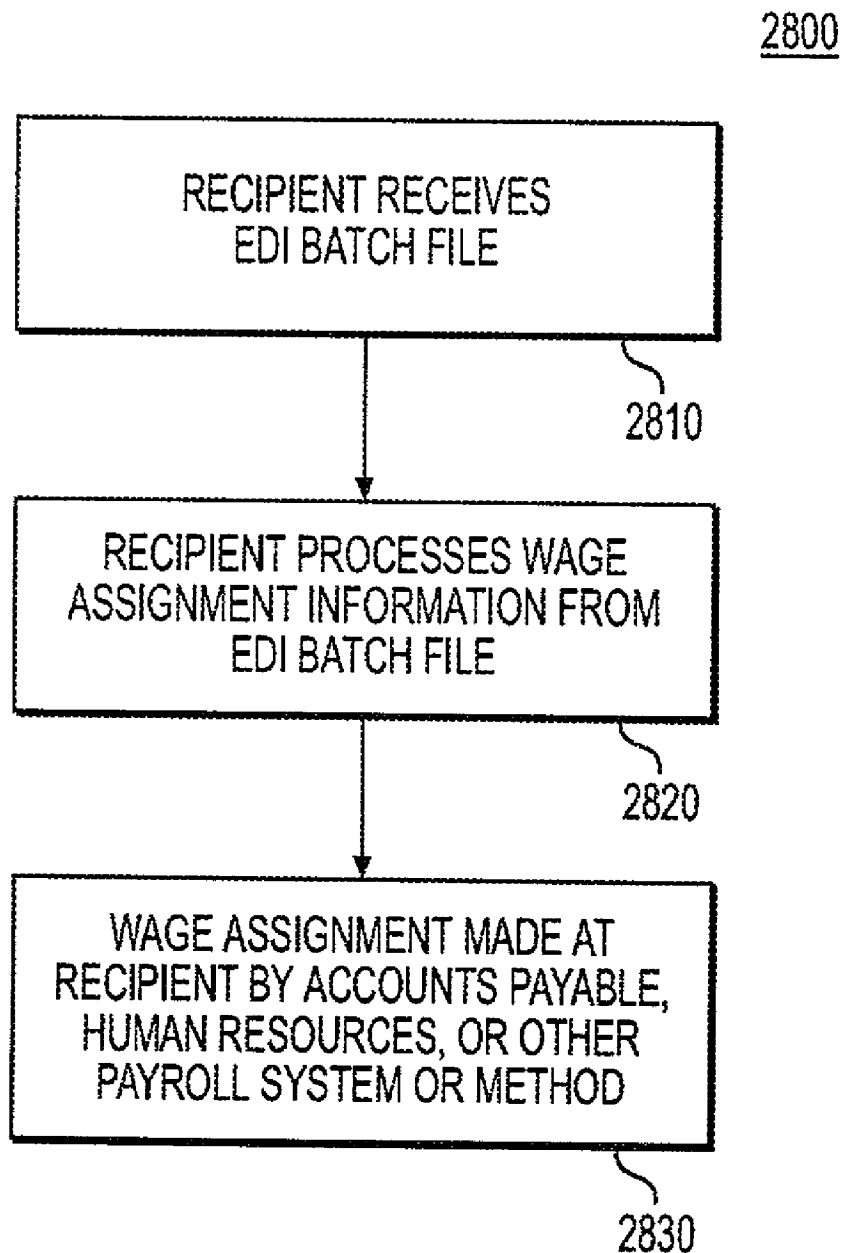


FIG. 28

2900

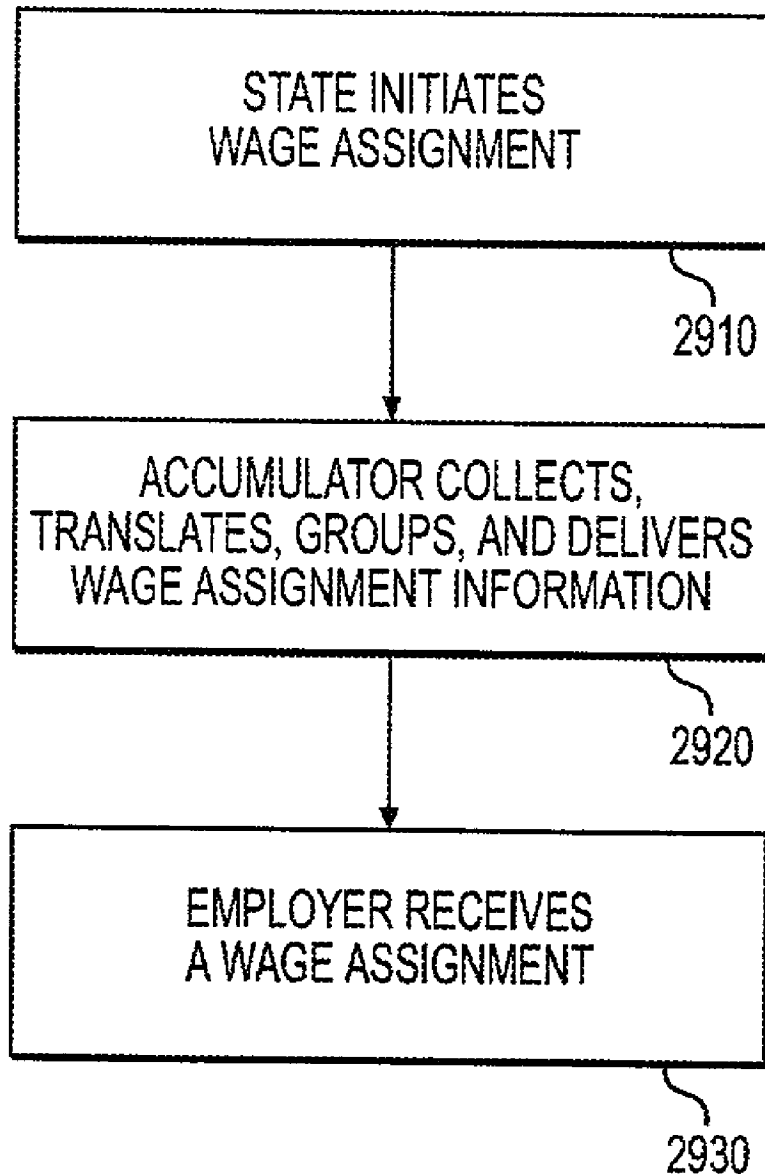


FIG. 29

3000

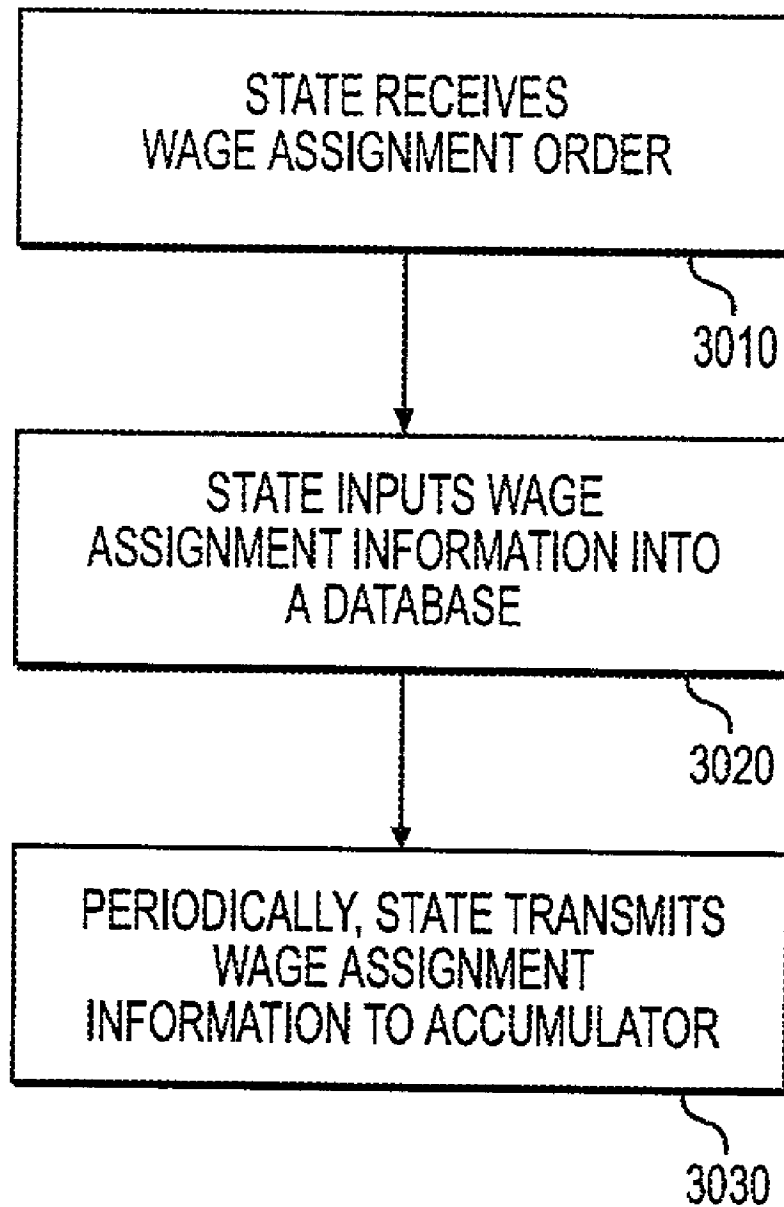
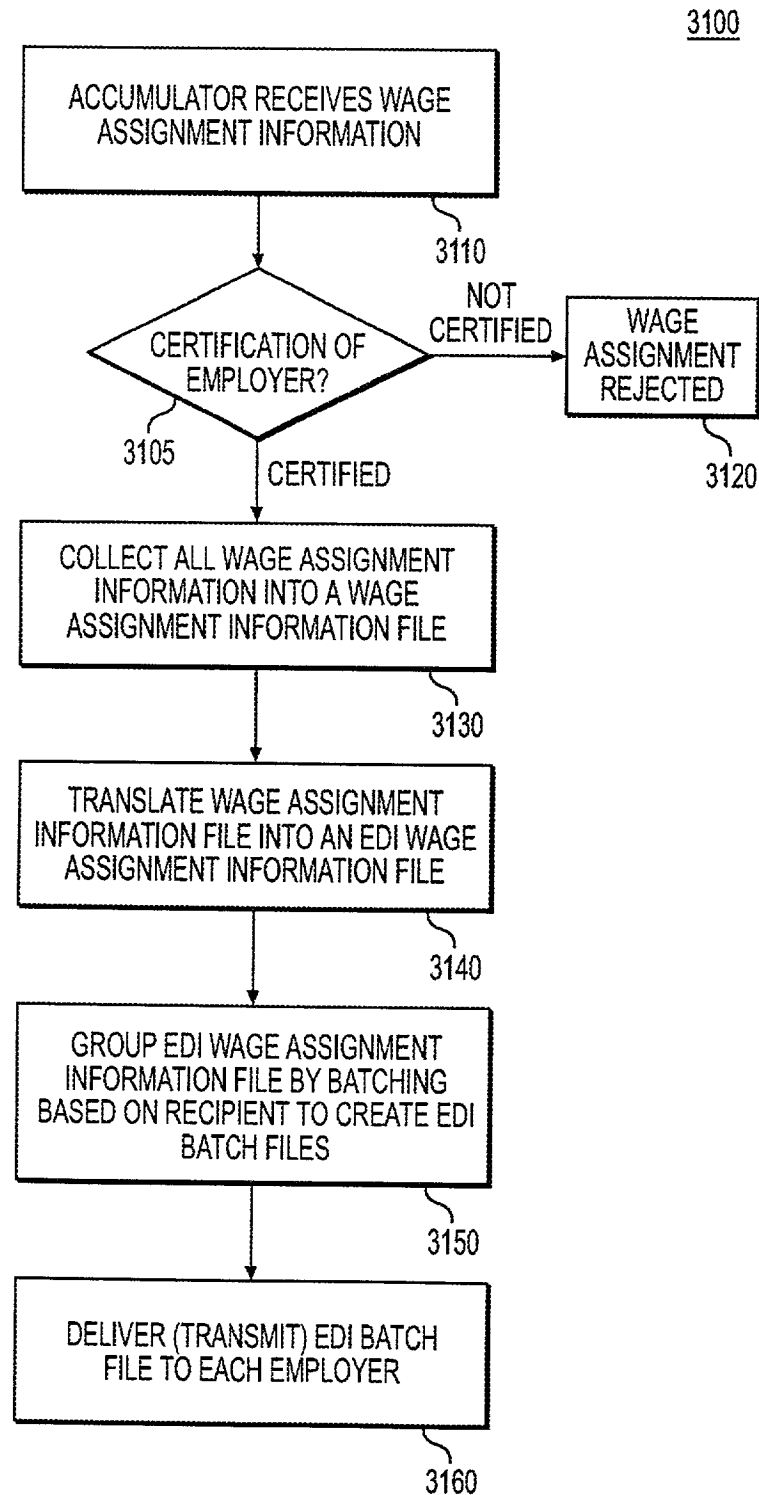


FIG. 30

**FIG. 31**

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3200

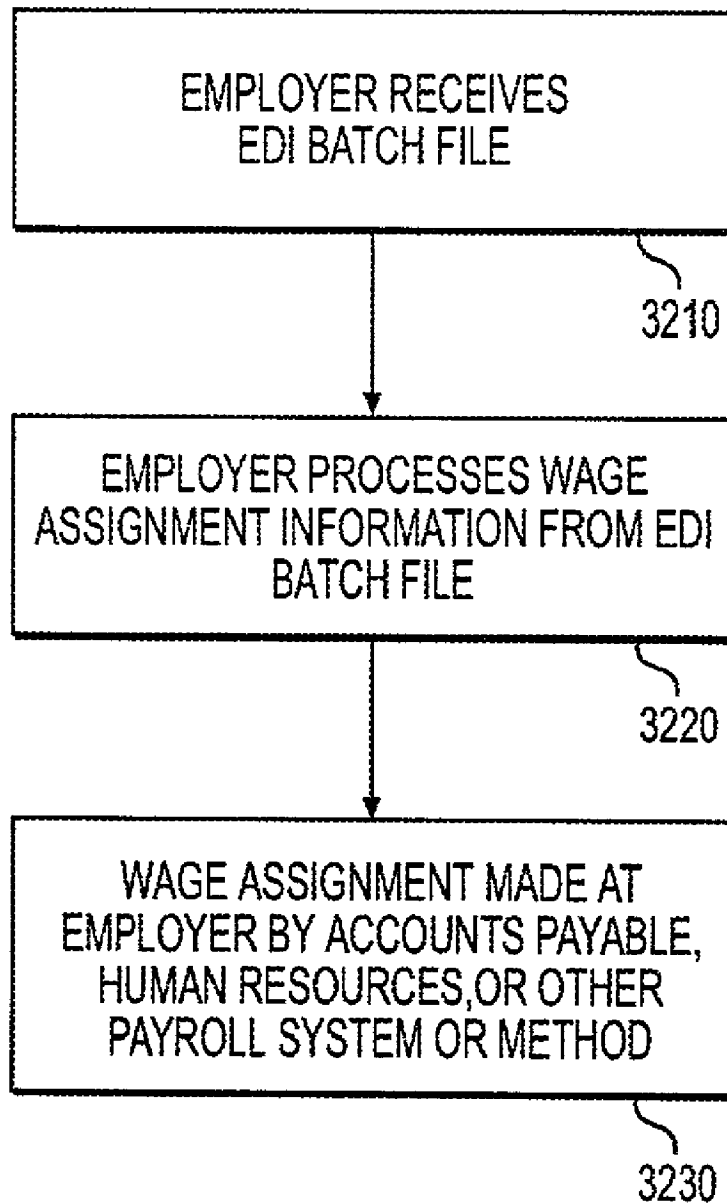


FIG. 32

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1

**METHOD AND APPARATUS FOR
ELECTRONIC COLLECTION,
TRANSLATION, GROUPING, AND
DELIVERY OF WAGE ASSIGNMENT
INFORMATION**

I. RELATED APPLICATIONS

This application is a continuation of U.S. application Ser. No. 09/200,943, filed Nov. 30, 1998 now U.S. Pat. No. 6,567,821 and claims the benefit of U.S. Provisional Application No. 60/085,731 filed May 15, 1998, all of which are incorporated herein by reference.

II. BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to the collection, translation, grouping, and delivery of wage assignment information. More particularly, the invention relates to methods and apparatus for electronic collection of wage assignment information, translation of the information into an electronic wage assignment format, grouping of the formatted information into files by batching for each respective recipient, and electronic delivery of the batched information files to each respective recipient.

2. Description of the Related Art

If a private or public entity wishes to collect a financial obligation from a particular person, the entity may obtain a judicial order requiring that the person make payments to satisfy the obligation. Frequently, the most common method to satisfy a court-ordered or court-enforced financial obligation is by requiring that the employer withhold a portion of the person's salary in the form of a wage assignment. A wage assignment may be implemented either by manual or electronic means. Manual implementation is the least efficient manner to process a wage assignment. Furthermore, even electronic implementation includes significant temporal and structural inefficiencies, primarily with regard to the collection, translation, grouping, and delivery of the information.

Electronic Implementation of Wage Assignments. Electronic commerce (EC) describes the paperless exchange of business information using electronic data interchange (EDI), electronic funds transfer (EFT), and other means of electronic communication. Of these various types of electronic communication, EDI allows for the accumulation, processing, transmittal, and receipt of business-related information that was once dependent on paper transactions. Generally, EDI describes the computer-to-computer exchange of business information using a public standard. The first such public EDI standard was created by the Transportation Data Coordinating Committee (TDCC), which created the first set of industry EDI standards comprising forty-five transaction sets for the transportation industry. These initial EDI transaction sets provided for the exchange of business information pertaining to ocean, motor, air, and rail carriers and the associated shippers, brokers, customs, freight forwarders, and bankers. Eventually, other business segments soon discovered that EDI was a more cost effective means of communicating business transaction information than paper transactions.

For the computer-to-computer exchange of business transaction information through EDI, however, a standard format is required for reasons of compatibility. Initially, the TDCC standards controlled, but these standards were limited to business transactions in the transportation industry.

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As the use of EDI expanded, there was a need for a new, broader standard. In response, the American National Standards Institute (ANSI) was tasked with the responsibility of creating a new standard, a standard that would include transaction sets for all types of business information. Yet, while ANSI is the coordinator and clearing house for national standards in the United States, ANSI does not write national standards. Instead, ANSI charters organizations, called Accredited Standards Committees (ASCs), to prepare consensus standards. ASCs are composed of voluntary representatives from industry, labor, consumer, and government. Periodically, ANSI charters an ASC to develop a new standard.

One such ASC, the ASC X12, was chartered by ANSI to develop standards for the structure, format, and content of electronic business transactions conducted through EDI. The ASC X12 is administered by the Data Interchange Standards Associations, Inc. (DISA), a not-for-profit corporation. Under the management of DISA, the ASC X12 composed and issued the ANSI X12 standard (i.e., the X12 standard). Pursuant to the X12 standard, each EDI transaction involves the electronic transmission of a business document using a particular transaction set. Thus, the transaction sets (or record sets) in the X12 standard define both the file structure and content format for communicating electronic business transactions using EDI.

Under the X12 standard, there are a number of particular record sets, each set corresponding to a particular type of business transaction. As of 1994, the X12 standard included 187 record sets. Notably, the various record sets of the X12 standard are delineated by specific numeric codes. For example, record set 135 pertains to student loan applications, and record set 813 pertains to electronic tax filing. For purposes of wage assignments, however, record set 521 is the most common type of transaction set, as record set 521 pertains to income or asset offset. Notably, the record set 521 is still under development. Nonetheless, when finally implemented, the 521 record set will make it possible to electronically communicate wage assignment information.

Therefore, under the X12 standard, there is an EDI transaction set for offsets from wages or other income (i.e., the 521 record set) that allows for offsets to wages or other income by means of an electronic implementation of a wage assignment. As described in the Draft Standard for Trial Use, 521 Income or Asset Offset, dated May 15, 1997, hereby incorporated by reference, the record set 521 allows for the input of both the wage transfer instruction as well as other pertinent information related to a wage assignment transaction. The wage transfer instruction and the other information relating to the wage transfer are referred to collectively as wage assignment information. With wage assignment information, an employer may be instructed to withhold automatically a predetermined portion of the wage of a particular employee and to transfer automatically the withheld portion to another person or entity. Thus, for the electronic implementation of a wage assignment, however, the wage assignment information must be collected from an initiating entity; the wage assignment information must then be translated into the proper electronic format; the wage assignment information must then be batched for each recipient; and the wage assignment information must then be delivered to each respective recipient. Furthermore, for this electronic implementation, the initiator of the wage assignment must be capable of sending the wage assignment information in a proper electronic format, and the recipient must be capable of receiving the wage assignment information in an electronic format and then implementing the wage assignment.

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However, the present systems and methodologies for the electronic processing of wage assignment information are inefficient and undesirable. These shortcomings are demonstrated by the present systems and methodologies. For purposes of considering the present systems and methodologies for electronic implementation of wage assignment information, an illustration of one common type of wage assignment is used herein as an example, namely, a wage assignment based on a child support obligation. With the present systems and methodologies, pursuant to an order by a judicial entity, a state entity generates a wage assignment order for a noncustodial parent to make child support payments to a custodial parent. In almost all cases, the state entity mails the order to the employer of the noncustodial parent. The employer of the noncustodial parent must then process the wage assignment information, so that a withheld wage portion is automatically removed from the wage of the noncustodial parent. Notably, for purposes of the present systems and methodologies, as set forth below, virtually any type of wage assignment would be similarly treated as in the example of a wage assignment based on a child support obligation.

Collection of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support obligation, a particular state entity is generally responsible for generating the wage assignment orders for every non-custodial parent subject to a wage assignment. In processing the orders, the state entity generally sends a wage assignment order to the indicated employer of each noncustodial parent. Thus, large employers generally receive multiple wage assignment orders. Moreover, in most cases, employers not only receive multiple wage assignment orders from a state entity, but employers also receive multiple wage assignment orders from multiple state entities. This current system is inefficient and undesirable. According to the present systems and methodologies, there is no means to collect the wage assignment orders and transmit the orders as a single unit to the employers, which would allow for the translation of the orders into an EDI format, batching of the files for each recipient, and delivery as a single EDI transaction. Thus, the present systems and methodologies for collecting wage assignment information are inadequate.

Translation of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support obligation, the X12 standard provides a mechanism for automating the allocation of wage assignment orders for child support payments to employers. Because the X12 standard includes a transaction set for wage assignments (i.e., the 521 record set), EDI may be used to process wage assignments electronically. However, in most states, wage assignment orders are still issued on paper. Thus, in these states, wage assignments cannot be implemented electronically. Further, in the remaining states that may use electronic wage assignments, while the wage assignment orders may be electronically generated, the orders are not issued in a format compatible with the X12 standard. Thus, a wage assignment order cannot be processed as an EDI transaction. As such, the present systems and methodologies are inefficient and undesirable. Therefore, according to the present systems and methodologies, there is no means to translate either the paper or the electronic information produced by the state agencies into a format compatible with the X12 standard that may then be batched delivered as an EDI file to employers. Thus, the present systems and methodologies of translating wage assignment information are inadequate.

Grouping of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support

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obligation, separate wage assignment orders are issued for each wage assignment. Thus, as noted above, an employer may not only receive numerous wage assignment orders but may also receive numerous wage assignment orders from numerous state entities. Such inefficiencies strain the resources of employers that must adhere to both judicial and governmental requirements regarding the processing of wage assignments. The X12 standard provides a means to avoid these inefficiencies by the use of EDI. Using the fields of a record set from the X12 standard, such as, for example, the 521 record set, wage assignment orders could be collected, translated and then batched for delivery to employers as a single EDI file. However, the present systems and methodologies do not provide a means of grouping wage assignment orders by recipient, where the orders are also collected, translated, and delivered in a wage assignment collection and delivery system. Thus, the present systems and methodologies of grouping wage assignment information are inadequate.

Delivery of Wage Assignment Information. For a typical wage assignment, such as, for example, a child support obligation, an employer implements the wage assignment upon receipt of the wage assignment order. However, if the wage assignment order has been converted into an electronic format, the wage assignment information must be transmitted to the employer in a useable manner. Some employers are capable of receiving files electronically, but most employers are not equipped with this capability. Without these capabilities, an employer cannot receive wage assignment information electronically and automatically implement processing of the wage assignment. As such, the present systems and methodologies are inefficient and undesirable. According to the present systems and methods, there is no means to deliver wage assignment information to employers based on particular delivery requirements, where the information is initially collected from a state entity, translated into an electronic format, and then grouped for each recipient. Thus, the present systems and methodologies of delivering wage assignment information are inadequate.

Electronic Implementation of Wage Assignment Information. For the reasons described above, systems and methods would be desirable that could collect wage assignment information, translate the wage assignment information into an EDI file compatible with the X12 standard, group the information by recipient, and then deliver a single EDI file to the each respective recipient. For a typical wage assignment, such as, for example, a child support obligation, such a system and method would allow for the collection of wage assignment orders for child support payments from state entities and, once collected, translate the wage assignment orders into an EDI file compatible with the X12 standard (e.g., the 521 record set), and then group the orders by recipient, and finally deliver a single EDI file to each respective recipient for processing. However, as described above, the current systems and methodologies reflect an unsatisfactory development of systems and methods to collect, translate, group, and deliver wage assignment information from an initiator of a wage assignment to a recipient. Of course, once the recipient obtains the wage assignment, the processing and implementation of the payment and disbursement occur using any known system or method.

For information on systems and methods for payment and disbursement processing generally, and for payment processing using debit-based EFT as well as for disbursement processing using addendum-based EDI specifically, see U.S. Pat. No. 5,946,669 of John POLK, entitled "Method and Apparatus for Payment Processing Using Debit-based Elec-

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tronic Funds Transfer and Disbursement Processing Using Addendum-based Electronic Data Interchange,” filed Sep. 30, 1997 and issued Aug. 31, 1999, incorporated herein by reference. U.S. Pat. No. 5,946,669 provides efficient apparatus and methods for processing payments and disbursements, including wage assignments. However, U.S. Pat. No. 5,946,669 does not provide a particular apparatus or method, whereby wage assignment information may be collected, translated, grouped, and delivered from an initiator to a recipient.

III. SUMMARY OF THE INVENTION

It is an object of an invention to provide a system for the collection, translation, grouping, and delivery of wage assignment information from an initiator to a recipient via an accumulator.

It is another object of an invention to provide a system for the receipt of wage assignment information at an initiator.

It is still another object of an invention to provide a system for the collection of wage assignment information at an accumulator from an initiator.

It is yet another object of an invention to provide a system whereby an accumulator may translate wage assignment information into an electronic wage assignment format.

It is also an object of an invention to provide a system whereby an accumulator may group electronic wage assignment information by batching the files for each respective recipient.

It is furthermore an object of an invention to provide a system whereby an accumulator may deliver the batched wage assignment information files to each respective recipient.

It is additionally an object of an invention to provide a system whereby a recipient may process wage assignments based on information received in a batched wage assignment information file.

To attain these and other objects, and in accordance with the purposes of the invention, as embodied and broadly described herein, one aspect of the invention includes a method consistent with the present invention that includes the steps, performed by a processor, of receiving a wage assignment at an initiator; dispatching the wage assignment from the initiator to an accumulator; processing the wage assignment at the accumulator; transmitting the wage assignment from the accumulator to a recipient; and implementing the wage assignment at the recipient.

In another aspect, the invention includes a method of processing a wage assignment at an initiator, comprising the steps, performed by a processor, of receiving a wage assignment; inputting the wage assignment into a database; and transmitting the wage assignment to an accumulator.

In yet another aspect, the invention includes a method of processing wage assignments at an accumulator, comprising the steps, performed by a processor, of collecting a plurality of wage assignments from a plurality of initiators; translating the wage assignments into files with a standard wage assignment format, the format including data in at least one data field; grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format; and delivering a batch file to each of a plurality of recipients.

In still another aspect, the invention includes a method of processing a wage assignment at a recipient, comprising the steps, performed by a processor, of receiving a wage assign-

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ment from an accumulator; processing the wage assignment; and implementing the wage assignment against a wage of an employee.

Additional aspects of the invention are disclosed and defined by the appended claims. It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention as claimed.

IV. BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings are included to provide a further understanding of the invention, are incorporated in and constitute a part of this specification, illustrate preferred embodiments of the invention, and, together with the description, serve to explain the principles of the invention.

In the drawings,

FIG. 1 is a block diagram of a wage assignment collection and delivery system;

FIG. 2A is a block diagram of an alternative wage assignment collection and delivery system;

FIG. 2B is a block diagram of another alternative wage assignment collection and delivery system;

FIG. 3 is a flow diagram of a method for processing wage assignment information in a wage assignment collection and delivery system, as shown in FIG. 1;

FIG. 4 is a block diagram of an initiator, as shown in FIG. 1;

FIG. 5 is a block diagram of an accumulator, as shown in FIG. 1;

FIG. 6 is a block diagram of the processing performed during collection by an accumulator, as shown in FIG. 5;

FIG. 7 is a block diagram of the processing performed during translation by an accumulator, as shown in FIG. 5;

FIG. 8 is a block diagram of the processing performed during grouping by an accumulator, as shown in FIG. 5;

FIG. 9 is a block diagram of the processing performed during delivery by an accumulator, as shown in FIG. 5;

FIG. 10 is a block diagram of a recipient, as shown in FIG. 1;

FIG. 11 is a block diagram of a data processor at an initiator, as shown in FIG. 4;

FIG. 12 is a block diagram of a data processor at an accumulator, as shown in FIG. 5;

FIG. 13 is a block diagram of a data processor at a recipient, as shown in FIG. 10;

FIGS. 14A–14B depict a sample of an order/notice to withhold income for child support, as may be used by a wage assignment collection and delivery system, such as the system shown in FIG. 1;

FIGS. 15A–15B depict a sample of an order/notice to withhold income for child support containing data for purposes of illustration, as may be used by a wage assignment collection and delivery system, such as the system shown in FIG. 1;

FIG. 16 is a sample of the contents of the wage assignment information database in the data processor at the initiator shown in FIG. 11, using the illustrative data from FIGS. 15A–15B;

FIG. 17 is a sample of the contents of the wage assignment information database in the data processor at the accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B;

FIG. 18 is a sample of the contents of the wage assignment information file database in the data processor at the

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accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B as well as other illustrative data;

FIGS. 19A–19B depict a sample of an order/notice to withhold income for child support containing field identifiers for purposes of illustrating mapping rules;

FIGS. 19C–19F are samples of mapping rules corresponding to FIGS. 19A–19B, such as mapping rules that would appear in the mapping rules database in the data processor at the accumulator shown in FIG. 12;

FIG. 20 is a sample of the contents of the EDI wage assignment information file database in the data processor at the accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B as well as other illustrative data;

FIG. 21 is a sample of the contents of the EDI batch file database in the data processor at the accumulator shown in FIG. 12, using the illustrative data from FIGS. 15A–15B as well as other illustrative data;

FIG. 22 is a sample of the contents of the recipient delivery database in the data processor at the accumulator shown in FIG. 12, containing data corresponding to illustrative parameters for an exemplary recipient delivery database;

FIG. 23 is a sample of the contents of a single EDI file from the EDI batch file database corresponding to a single recipient from the recipient delivery database in the data processor at the accumulator shown in FIG. 12, containing illustrative data for delivery to an illustrative recipient;

FIG. 24 is a sample of the contents of the EDI file database in the data processor at the recipient shown in FIG. 13, containing illustrative data for a single illustrative recipient;

FIG. 25 is a flow diagram of a method for processing wage assignment information in a wage assignment collection and delivery system, in accordance with one embodiment of the invention, as shown in FIG. 1;

FIG. 26 is a flow diagram of a method for processing wage assignment information at an initiator, in accordance with one embodiment of the invention, as shown in FIG. 25;

FIG. 27 is a flow diagram of a method for processing wage assignment information at an accumulator, in accordance with one embodiment of the invention, as shown in FIG. 25;

FIG. 28 is a flow diagram of a method for processing wage assignment information at a recipient, in accordance with one embodiment of the invention, as shown in FIG. 25;

FIG. 29 is a flow diagram of a method for processing wage assignment information in a wage assignment collection and delivery system, in accordance with an alternative embodiment of the invention, as shown in FIG. 2B;

FIG. 30 is a flow diagram of a method for processing wage assignment information at an initiator, in accordance with an alternative embodiment of the invention, as shown in FIG. 29;

FIG. 31 is a flow diagram of a method for processing wage assignment information at an accumulator, in accordance with an alternative embodiment of the invention, as shown in FIG. 29;

FIG. 32 is a flow diagram of a method for processing wage assignment information at a recipient, in accordance with an alternative embodiment of the invention, as shown in FIG. 29.

V. DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred embodiment of this invention, known as NEWS® (National Employer Wage Withholding Ser-

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vice), is presently marketed by Lockheed Martin IMS, now ACS State & Local Solutions, Inc. The scope of the present invention, however, encompasses modifications and variations as described by the methods and apparatus described herein or as contained within the scope of the listed claims and their equivalents.

A. Introduction

The system of a preferred embodiment of the invention avoids the inefficiencies and shortcomings of the present wage assignment systems and methodologies by providing for the electronic collection, translation, grouping, and delivery of wage assignment information. Systems consistent with the present invention include receiving wage assignment information at an initiator regarding a wage assignment. The initiator gathers the wage assignment information and transmits the information to an accumulator. The accumulator collects the wage assignment information and then translates the information into an electronic format, such as an electronic file that corresponds to the public EDI standard established by the X12 standard. After translation, the accumulator then batches the electronic files based on a field in the electronic format. The accumulator then delivers a single batch file to each recipient. Upon receipt of a batch file, a recipient then processes the wage assignment and implements a funds or asset transfer in any known manner.

A preferred system consistent with the invention comprises several components, including a plurality of initiators, an accumulator, and a plurality of recipients. Each initiator receives and processes wage assignment information for various individuals. The initiators store and maintain the wage assignment information in a database and periodically transmit the database to an accumulator. The accumulator serves as a processing station (also known as a Value Added Network, or VAN) between the plurality of initiators and the plurality of recipients. In particular, the accumulator collects wage assignment information from each of the plurality of initiators and ensures that the information from each initiator is valid. The accumulator then translates the wage assignment information into a standard format, for example, into an EDI file, such as the 521 record set. The accumulator then batches the EDI files according to the recipient indicated in the EDI file and delivers a single EDI file to each of the plurality of recipients. The recipient processes and implements the wage assignment through any of several known methods. For an example of the implementation of a wage assignment, refer to U.S. Pat. No. 5,946,669.

B. System

FIG. 1 shows a wage assignment collection and delivery system according to one embodiment of the present invention. System 100 includes a plurality of initiators 110_{1-n}, an accumulator 120, and a plurality of recipients 130_{1-m}. Initiators 110_{1-n} may represent any entity that initiates a wage assignment. Accumulator 120 is the processing station that receives wage assignments from initiator 110_{1-n}, processes the wage assignments, and then transmits the wage assignments to recipients 130_{1-m}. Recipients 130_{1-m} entail those entities that receive and implement wage assignments.

FIG. 2A shows a wage assignment collection and delivery system according to an alternative embodiment of the present invention. System 200 includes a plurality of agencies 210_{1-n}, an accumulator 220, and a plurality of employers 230_{1-m}. In this embodiment, the plurality of agencies 210_{1-n} are agencies that may initiate a wage assignment, and the plurality of employers 230_{1-m} are the employers that may receive and implement wage assignments. Similar to FIG. 1, accumulator 120 in FIG. 2A is the processing station that receives wage assignments from agencies 210_{1-n}, pro-

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cesses the wage assignments, and then transmits the wage assignments to employers **230_{1-m}**.

FIG. 2B shows a wage assignment collection and delivery system according to another alternative embodiment of the present invention. System **205** includes a plurality of states **215_{1-n}**, accumulator **220**, and a plurality of employers **235_{1-m}**. In this embodiment, the plurality of states **215_{1-n}** are states or state entities that may initiate a wage assignment, and the plurality of employers **235_{1-m}** are the employers that may receive and implement wage assignments. Similar to FIG. 1 and FIG. 2A, accumulator **120** in FIG. 2B is the processing station that receives wage assignments from states **215_{1-n}**, processes the wage assignments, and then transmits the wage assignments to employees **235_{1-m}**. In a preferred embodiment of the system shown in FIG. 2B, the plurality of states **215_{1-n}** are state agencies that initiate Child Support Orders requiring wage assignments for noncustodial parents, and the plurality of employers **235_{1-m}** are the employers of the noncustodial parents subject to the wage assignments pursuant to the Child Support Orders.

C. Process

FIG. 3 is a flow chart **300** illustrating the operation of a system **100** as shown in FIG. 1. As shown in FIG. 3, each initiator **110** inputs wage assignment information containing a wage assignment into a database that each initiator maintains separately (step **310**). After the wage assignment information is input into the database, each initiator **110** transmits, such as, in a periodic batch of ASCII files, the wage assignment information stored in the database to accumulator **120** (step **320**). Accumulator **120** then collects all the wage assignment information from all initiators **110** (step **325**). Accumulator **120** next translates the wage assignment information into an electronic format, which preferably comprises an EDI file using the **521** record set (step **330**). After accumulator **120** creates the EDI files, they are initially organized based on the initiator. After the translation, however, accumulator **120** reorganizes the wage assignment files based on one of the data fields, such as, for example, element BPR10 of the **521** record set, which indicates the company initiating the funds transfer (i.e., employer). During this grouping (or batching), a batch of EDI files are created, preferably so that each EDI file is batched based on the employer (step **340**). Accumulator **120** then delivers the batched EDI files to each of the plurality of recipients **130** (step **350**). The delivery medium that accumulator **120** uses to deliver the batched EDI files to each of the plurality of recipients **130** depends on the capability of each recipient. For example, accumulator **120** may transmit an EDI file electronically to the most sophisticated recipients **130**, while other recipients **130** may access a web page bulletin board (not shown) that is maintained by accumulator **120**, while still other recipients **130** may receive the files via facsimile, and while still other recipients **130** may receive their files by mail. Whatever the delivery means, once received, each of the plurality of recipients **130** then processes the wage assignment and initiates a funds transfer through any known manner (step **360**). Notably, a detailed description of the methods of operation of systems consistent with the operation of this system are provided in FIGS. 25-32.

D. Components

FIG. 4 illustrates one representative embodiment of an initiator **110** shown in FIG. 1. As shown in FIG. 4, initiator **110** includes input station **405**, data processor **410**, and transmission means **420**. Input station **405** provides for the input of wage assignments into a database at initiator **110**. Input station **405** may include either manual or electronic

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means for inputting wage assignments into a wage assignment information database. Input station **405** may also include an optical character reader (OCR). Data processor **410** contains the database created by input station **405**. Similarly, data processor **410** provides for the periodic transmission of the contents of the wage assignment information database to accumulator **120** via transmission means **420**. Although data processor **410** preferably transmits the contents of the database electronically, initiator **110** may also transmit the database by other means, including by manual means. Thus, transmission means **420** includes both electronic and non-electronic means by transmission. A detailed description of data processor **410** is provided in FIG. 11.

FIG. 5 illustrates one representative embodiment of accumulator **120** shown in FIG. 1. As shown in FIG. 5, accumulator **120** includes data processor **505**, collection processing **510**, translation processing **520**, grouping processing **530**, and delivery processing **540**. After initiator **110** transmits a wage assignment to accumulator **120**, data processor **505** at accumulator **120** collects the wage assignment during collection processing **510**. Collection processing **510** includes the collection of a plurality of wage assignment information from a plurality of initiators **110**. Generally, the plurality of initiators **110** transmits a plurality of wage assignment information to accumulator **120** in the form of ASCII format. Thereafter, translation processing **520** converts the wage assignment information into a standardized electronic format such as, for example, an EDI file using the X12 standard. Grouping processing **530** then batches the EDI files based on one data field from the EDI file. Preferably, the data field on which the batching occurs is the data field for the recipient. In this manner, grouping processing **530** batches the EDI files based on the recipient. Delivery processing **540** then delivers a single EDI file to each of a plurality of recipients **130**. Notably, although delivery processing preferably occurs by electronic means, delivery processing **540** may take place by electronic, manual, or other means. Nonetheless, as noted above, in a preferred implementation, the EDI files are batched based on recipient, and therefore, delivery processing **540** dispatches a single EDI file from accumulator **120** to each of a plurality of recipients **130**. A detailed description of data processor **505** is provided in FIG. 12.

FIG. 6 illustrates one representative embodiment of collection processing **510** shown in FIG. 5. As shown in FIG. 6, collection processing **510** includes a plurality of wage assignment information **610_{1-n}** and wage assignment information file **620**. Wage assignment information **610_{1-n}**, which are shown in FIG. 6 as wage assignment information **610₁**, wage assignment information **610₂**, wage assignment information **610_n**, is representative of the plurality of wage assignments received from a plurality of initiators **110**. As shown in FIG. 6, the plurality of wage assignment information **610_{1-n}** are collected by accumulator **120** and placed in wage assignment information file **620**. Generally, the plurality of wage assignment information **610_{1-n}** are in the ASCII format. Wage assignment information file **620** is simply a database containing the plurality of wage assignment information **610_{1-n}**.

FIG. 7 illustrates one representative embodiment of translation processing **520** shown in FIG. 5. As shown in FIG. 7, translation processing **520** includes wage assignment information file **620**, map processing **710**, mapping rules **715**, and EDI wage assignment information file **720**. In translation processing **520**, as shown in FIG. 7, wage assignment information file **620** is subject to map processing **710**. In map processing **710**, mapping rules **715** are applied to the

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contents of wage assignment information file 620. In a preferred implementation, mapping rules 715 contain the mapping rules for the 521 record set of the X12 standard. Thus, in this preferred implementation, each wage assignment information in wage assignment information file 620 is translated into an EDI format pursuant to mapping rules 715 by map processing 710. Following map processing 710, each wage assignment information contained in wage assignment information file 620 has been translated into an electronic file, preferably an EDI file. These EDI files are then recorded in EDI wage assignment information file 720.

FIG. 8 illustrates one representative embodiment of grouping processing 530 shown in FIG. 5. As shown in FIG. 8, grouping processing 530 includes a plurality of wage assignment information as EDI files, including wage assignment information as EDI file (for Recipient₁) 810, wage assignment information as EDI file (for Recipient₂) 815, wage assignment information as EDI file (for Recipient₁) 820, and wage assignment information as EDI file (for Recipient_n) 825. Grouping processing 530 also includes batch processing 830, and a plurality of EDI batch files for recipients, including EDI batch file for Recipient₁ 840, EDI batch file for Recipient₂ 850, and EDI batch file for Recipient_n 860. FIG. 8 contains examples showing the operation of batch processing 830, which references both the plurality of wage assignment information as EDI files and the plurality of EDI batch files for recipients. These examples are based on references to Recipient₁ and Recipient₂ as well as Recipient_n.

As shown in FIG. 8, wage assignment information as EDI file (for Recipient₁) 810 and wage assignment information as EDI file (for Recipient₁) 820 are two EDI files for Recipient₁. Wage assignment information as EDI file (for Recipient₂) 815 is a single EDI file for Recipient₂. Wage assignment information as EDI file (for Recipient_n) 825 shows that an unlimited number of other EDI files may be available for an unlimited number of other recipients. During grouping processing 530, batch processing 830 batches the EDI files based on one data field from the EDI file. As described above, in a preferred implementation, batch processing 830 utilizes the recipient field from the EDI file (e.g., element BPR10 of the 521 record set) as the field for purposes of batch processing 830. FIG. 8 depicts batch processing based upon this preferred implementation. Thus, as shown in FIG. 8, EDI batch file for Recipient₁ 840 shows wage assignment information as EDI file (for Recipient₁) 810 and wage assignment information as EDI file (for Recipient₁) 820 as batched in a single EDI batch file for Recipient₁. Similarly, EDI batch file for Recipient₂ 850 contains wage assignment information as EDI file (for Recipient₂) 815 as a single batch file for Recipient₂. These examples for Recipient₁ and Recipient₂ would be implemented similarly for a plurality of other Recipients, such as, for example, Recipient_n. Thus, as shown in EDI batch file for Recipient_n 860, wage assignment information as EDI file (for Recipient_n) 825 would be contained in a single batch file for Recipient_n.

FIG. 9 illustrates one representative embodiment of delivery processing 540 shown in FIG. 5. As shown in FIG. 9, delivery processing 540 includes wage assignment EDI batch file for Recipient₁ 910, delivery 920, FTP 930, Internet 940, tape 950, diskette 960, and Recipient_x 970. Delivery processing 540 takes an EDI batch file containing wage assignment information for Recipient₁ 910 and implements delivery 920. Delivery 920 entails the delivery of the EDI batch file to a recipient 130, i.e., Recipient_x 970. Delivery 920 may take place by one of several methods, such as, for

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example, FTP 930, Internet 940, a tape 950, and diskette 960. Other delivery methods are also available (not shown). Whatever method utilized by delivery 920, the wage assignment EDI batch file for Recipient_x 910 is delivered to Recipient 970. In a preferred implementation, delivery processing 540 contains a database indicating the preferred method of delivery for each of a plurality of recipients, such as, Recipient_x 970. A detailed description of the database indicating the preferred method of delivery is provided in FIG. 22.

FIG. 10 illustrates one representative embodiment of recipient 130 shown in FIG. 1. As shown in FIG. 10, recipient 130 includes transmission means 1005, data processor 1010, payroll department 1020, and wage assignment 1030. Recipient 130 receives wage assignment information from accumulator 120 via transmission means 1005. As described above, in a preferred implementation, transmission means 1005 receives an EDI file containing wage assignment information electronically. However, recipient 130 may also receive wage assignment information via transmission means 1005 in other forms, such as, for example, diskette. Whatever the form, once recipient 130 receives the wage assignment information, the wage assignment information is recorded in data processor 1010. Recipient 130 then processes the wage assignment in data processor 1010, which includes informing payroll department 1020 of the wage assignment. Note that payroll department 1020 may include any implementation of the wage assignment, manual or electronic. Payroll department 1020 then implements wage assignment 1030. In implementing wage assignment 1030, payroll department offsets or withholds a portion of the salary of the employee subject to the wage assignment. Such payment and disbursement processing may occur by any known system or method. A detailed description of data processor 1010 is provided at FIG. 13.

FIG. 11 illustrates one representative embodiment of data processor 410 shown in FIG. 4, in a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 11, data processor 410 at initiator 110 preferably includes one or more data processors 1100 equipped with conventional hardware and having operating software to support a central processing unit ("CPU") 1110, a random access memory ("RAM") 1120, a monitor 1130, an input/output (I/O) controller 1140, a data storage device (disk) 1150, an input device 1160, and an output device 1170. Although not depicted, processing station 300 is also capable of supporting peripheral equipment, such as, for example, scanners, printers, modems, etc., in conventional manners.

As shown in FIG. 11, CPU 1110 is directly coupled to each of RAM 1120, I/O controller 1140, and disk 1150. CPU 1110 operates by accessing RAM 1120 and disk 1150 in any conventional manner to execute program code (not shown) stored in at least one of RAM 1120 and disk 1150 to carry out the functions and acts described in connection with the operation of processing station 1100. CPU 1110 preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as the accumulation, processing, storage, and transmission of wage assignment information.

In one embodiment, processing station 1100 shown in FIG. 11 located at an initiator 110, such as, for example, a state child support department, operates to collect wage assignment information from persons, such as, for example, persons subject to mandatory child support payments. In such an example, a case worker at a state child support department inputs data at input device 1160 regarding a

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noncustodial parent who is subject to a Child Support Order. Data input at input device 1160 is received at CPU 1110 through I/O controller 1140 and stored in wage assignment information database 1152, which is stored in disk 1150. Preferably, processing station 1100 periodically transmits a batch of files through output device 1170 containing the wage assignment information stored in wage assignment information database 1152 to accumulator 120 as shown in FIG. 1. Although it is preferable to transmit the database as a batch of files, processing station 1100 could transmit the wage assignment information to accumulator 120 using other equivalent electronic means, such as E-mail, Internet bulletin boards, etc., or non-electronic means, such as Federal Express and the U.S. Postal Service. In the case of non-electronic means, processing station 1100 would either transmit a printout of the database or download the database onto a disk and transmit the disk to accumulator 120. Once the non-electronic information arrived at accumulator 120, the wage assignment information would then need to be manually input into the data processor at accumulator 120.

As shown in FIG. 11, disc 1150 preferably comprises a large capacity memory capable of maintaining wage assignment information database 1152. Wage assignment information database 1152 contains data corresponding to a wage assignment, such as, for example, a Child Support Order. Wage assignment information database 1152 can be structured in many forms and typically includes informational fields for the name of the originating state, the name of the originating jurisdiction, the date, and employer identification (which is normally the employer's Federal Tax Identification Number), the employer name, the employer address, the name of the custodial parent, the social security number of the non-custodial parent, the name of a custodial parent, the ordered termination date (which indicates when the child support is no longer mandatory), the dollar amount, etc. Data contained in wage assignment database 1152 may be periodically obtained and updated from input device 1160. Samples of the records and the respective fields contained in wage assignment information database 1152 is shown in and described in connection with FIG. 16.

FIG. 12 illustrates one representative embodiment of data processor 505 shown in FIG. 5, in a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 12, accumulator 120 preferably includes one or more processing stations 1200, which could be a conventional personal computer, mainframe, or equivalent, each equipped with conventional hardware and having operating software to support a central processing unit ("CPU") 1210, a random access memory ("RAM") 1220, a monitor 1230, an input/output (I/O) controller 1240, a data storage device (disk) 1250, an input device 1260, and an output device 1270. Although not depicted, processing station 1200 is also capable of supporting peripheral equipment such as scanners, printers, modems, etc., in conventional manners.

As shown in FIG. 12, CPU 1210 is directly coupled to each of RAM 1220, I/O controller 1240, and disk 1250. CPU 1210 operates by accessing RAM 1220 and disk 1250 in any conventional manner to execute program code (not shown) stored in at least one of RAM 1220 and disk 1250 to carry out the functions and acts described in connection with the operation of processing station 1200. CPU 1210 preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as the accumulation, transmission, organization, processing, and storage operations as well as the collection, translation, grouping, and delivery of wage assignment information.

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In one embodiment, processing station 1200 receives wage assignment information at periodic intervals through input device 1260. In a preferred embodiment, processing station 1200 receives wage assignment information at periodic intervals through input device 1260 in the form of electronic files containing the data relating to Child Support Orders from a plurality of states 215, as shown in FIG. 2B. CPU 1210 then temporally stores either the wage assignment information or the wage assignment information file in wage assignment information database 1252 or in wage assignment information file database 1253, both of which are stored in disk 1250. If the wage assignment information is not formatted in a file, CPU 1210 initially stores the wage assignment information in wage assignment information database 1252 and then converts the wage assignment information into a wage assignment file and stores the file in wage assignment information file database 1253. However, if the wage assignment information is initially formatted in a file, then CPU 1210 stores the wage assignment information directly in wage assignment information file database 1253. Next, preferably, CPU 1210 translates the files in wage assignment information file database 1253 into an EDI compatible file according to the ANSI X12 standard, specifically in the 521 record set, and these EDI files are then placed in EDI wage assignment file information file database 1254, which is stored in disk 1250. In order to translate the files into an EDI file, CPU 1210 accesses a rules database, such as a mapping rules database 1251, which is stored in disk 1250. Mapping rules database 1251 contains the codes needed by CPU 1210 to translate a file received from an initiator into an electronic file, preferably into an EDI file corresponding to the 521 record set. After translation, processing station 1200 then batches the EDI files in a database, such as EDI batch file database 1255, which is stored in disk 1250. In a preferred implementation, CPU 1210 batches the EDI files together based on a field containing information about the employer of the noncustodial parent (for example, element BPR10 of the 521 record set). In this implementation, CPU 1210 gathers all EDI files that indicate the same employer, regardless of the state of jurisdiction of origin, and batches those EDI files together in a single batched EDI file. Thereafter, CPU 1210 delivers the batched EDI file through output device 1270 to a recipient 130 on a periodic basis, which corresponds to the indicated recipient among the plurality of recipients 130.

Notably, in the preferred embodiment discussed above, while it is preferable to send a batched EDI file to an indicated employer, the indicated employer may not be capable of electronically receiving EDI files for processing. To account for this possibility, processing station 1200 has a recipient delivery database 1257, which is stored in disk 1250. Prior to transmitting a batched EDI file to an indicated employer, CPU 1210 accesses recipient rules database 1257. If recipient rules database 1257 indicates that the indicated employer can receive EDI file, then the EDI file is transmitted to the indicated employer electronically. Otherwise, CPU 1210 transmits the EDI file (i.e., preferably containing a batch file of one or more EDI files using the 521 record set) to the indicated employer through output device 470 by any transmission medium. In other words, the EDI file may even be sent through E-mail, facsimile transmission, or even the mail. As a further alternative to transmitting the files to the employer, CPU 1210 could transmit the EDI file via output device 1270 to a Web page or bulletin board (not shown). The indicated employer would receive the EDI file by accessing the Web page or bulletin board and then downloading the batched files. These alternative methods would

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use any conventional Internet server or computer system, access protocols, uploading protocols, downloading protocols, and security protocols. Data contained in one or more of these databases **1251**, **1252**, **1253**, **1254**, **1255**, and **1257** may be periodically obtained and updated from input device **1260**. Samples of the records and the respective fields contained in databases **1251**, **1252**, **1253**, **1254**, **1255**, and **1257** are shown in and described in connection with FIGS. **17–23**.

FIG. **13** illustrates one representative embodiment of data processor **1010** shown in FIG. **10**, in a wage assignment collection and delivery system as shown in FIG. **1**. As shown in FIG. **13**, each recipient **130** preferably includes one or more processing stations **1300**, which could be a conventional personal computer, mainframe, or equivalent, each equipped with conventional hardware and having operating software to support a central processing unit (“CPU”) **1310**, a random access memory (“RAM”) **1320**, a monitor **1330**, an input/output (I/O) controller **1340**, a data storage device (disk) **1350**, an input device **1360**, and an output device **1370**. Although not depicted, processing station **1300** is capable of supporting peripheral equipment such as scanners, printers, modems, etc., in conventional manners.

As shown in FIG. **13**, CPU **1310** is directly coupled to each of RAM **1320**, I/O controller **1340**, and disk **1350**. CPU **1310** operates by accessing RAM **1320** and disk **1350** in any conventional manner to execute program code (not shown) stored in at least one of RAM **1320** and disk **1350** to carry out the functions and acts described in connection with the operation of processing station **1300**. CPU **1310** preferably comprises at least one high-speed digital data processor adequate to execute program modules consistent with the invention, such as the accumulation, storage, and processing of wage assignment information and the implementation of wage assignments.

In a preferred embodiment, processor station **1300** receives wage assignment information transmitted from accumulator **120** through an electronic medium by inputting an EDI file directly into CPU **1310** through input device **1360**. Data input at input device **1360** is received at CPU **1310** through I/O controller **1340** and stored in EDI file database **1352**, which is stored in disk **1350**. Other embodiments, however, include downloading the wage assignment information from an Internet bulletin board, from E-mail, or inputting the wage assignment information manually. Whatever the means of transmission of wage assignment information, in a preferred implementation, recipient **130** is the employer of the noncustodial parent subject to a wage assignment, and that assignment is then implemented in a manner as described in U.S. patent application Ser. No. 08/941,187. Recipient **130**, however, can process the wage assignment in any manner currently known in the art. Regardless of the manner of implementation, the data contained in database **1352** may be periodically obtained and updated from input device **1360**. Samples of the records and the respective fields contained in database **1352** is shown in and described in connection with FIG. **24**.

E. Database Formats

In FIGS. **11–13**, a number of databases are referenced with respect to the wage assignment collection and delivery systems shown in FIG. **1** and FIG. **2B**. The following paragraphs describe these databases, but for purposes of illustration, these databases are depicted containing sample data. In fact, the samples of the contents of wage assignment information database **1152**, mapping rules database **1251**, wage assignment information database **1252**, wage assignment information file database **1253**, EDI wage assignment

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information file database **1254**, EDI batch file database **1255**, recipient delivery database **1257**, and EDI file database **1352** are shown in FIGS. **16–24**. The specific data and fields illustrated in these figures represent only one possible embodiment of a type of record that can be stored in the databases. For purposes of illustration, the record depicted is that of the preferred embodiment, i.e., the **521** record set of the X12 standard. Therefore, in most cases, the fields shown in FIGS. **16–24** are relatively straight-forward and self-explanatory. However, note that, in addition to the disclosed databases, the data and fields of these databases, as well as the number of databases, can be readily modified from the described embodiments, for example, to include more or fewer data fields or different or additional records.

FIG. **14A–14B** depict a sample of an order/notice to withhold income for child support, i.e., a Child Support Order. As shown in FIG. **14A–14B**, the Child Support Order contains a plethora of information relating to a wage assignment for purposes of a child support obligation. Nonetheless, the form depicted in FIGS. **14A–14B** is a standard Child Support Order, as used by judicial entities and implemented by state agencies. For that reason, the form depicted in FIGS. **14A–14B** is hereby incorporated by reference as well as reproduced for purposes of reference in FIGS. **14A–14B**. For the following descriptions, FIGS. **14A–14B** are used as a reference for purposes of providing a working example of the databases in the wage assignment collection and delivery systems shown in FIG. **1** and FIG. **2B**.

FIGS. **15A–15B** depict a sample of a Child Support Order containing sample data for purposes of illustration. This sample data will be used as the sample content for the databases described in FIGS. **16–24**. As shown in FIGS. **15A–15B**, the sample Child Support Order has been issued in the State of Virginia by a court in Alexandria, with a order date of Jun. 12, 1998 and a court number of 98–123. The sample order is directed to the employer of John J. Doe which is Y Corp., located at 123 Main Street, Anytown, Va. 12345-00000. As shown in the Child Support Order, the social security number of John Doe is 123-45-6789, the case identifier is 98–123, and the custodial parent is Jane Doe. Furthermore, as also shown in this sample Child Support Order, the child’s name is Susie Doe, who has a date of birth of Jun. 1, 1990. As stated in the sample order, the Child Support Order pertains to an employer in the State of Virginia, and the order requires a wage assignment against the wages of John Doe at Y Corp. until Jun. 1, 2008. Under the terms of the sample Child Support Order, \$800.00 a month is required in child support, and \$100.00 a month is required in medical support; thus a total of \$900.00 a month is required for the wage assignment. The foregoing information from the sample Child Support Order is used for purposes of illustration in FIGS. **16–24**.

FIG. **16** illustrates a sample of the contents of wage assignment information database **1152** in data processor **410** at initiator **110** as shown in FIG. **11**, using sample information in a preferred implementation of a wage assignment collection and delivery system. Wage assignment information database **1152**, contains a listing of the information relating to a wage assignment, such as the information contained in a Child Support Order, such as, for example, sample order **1500**, as depicted in FIGS. **15A–15B**. As shown in FIG. **16**, wage assignment information database **1152** contains **8** numbered fields but provides for an unlimited number of additional fields. As also shown in FIG. **16**, a wage assignment may contain various types of information, which are recorded in wage assignment information

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database 1152. The wage assignment information in wage assignment information database 1152 may be recorded in any order.

FIG. 17 illustrates a sample of the contents of wage assignment information database 1252 in data processor 505 at accumulator 120 as shown in FIG. 12, using sample information in a preferred implementation of a wage assignment collection and delivery system. Wage assignment information database 1252 contains the same information as wage assignment information database 1152. Essentially, initiator 110 transmits the contents of wage assignment information database 1152 to accumulator 120. Following such transmission, accumulator 120 initially records the information received from initiator 110 in wage assignment information database 1252. Wage assignment information database 1252 is thus a temporary database at accumulator 120.

FIG. 18 illustrates a sample of the contents of wage assignment information file database 1253 in data processor 505 at accumulator 120 as shown in FIG. 12, using sample information in a preferred implementation of a wage assignment collection and delivery system. As shown in FIG. 18, wage assignment information file database 1253 contains nine fields but allows for an unlimited number of additional fields. In one implementation, field 1 identifies initiator 110. Thus, as shown in FIG. 18, field 1 shows two initiators, labeled I_1 and I_2 . For I_1 , there is one file in wage assignment information file database 1253, and for I_2 there are two files in wage assignment information file database 1253. Significantly, as shown in FIG. 18, the order of the information in each field need not be standardized for purposes of wage assignment information file database 1253.

FIGS. 19A–19F illustrate a sample of the form and contents of mapping rules database 1251 in data processor 505 at accumulator 120 as shown in FIG. 12, using a sample mapping form and sample mapping rules for a preferred implementation of a wage assignment collection and delivery system. FIGS. 19A–19B demonstrate how a mapping database may be created for purposes of map processing. FIGS. 19A–19B depict the same Child Support Order of FIGS. 14A–14B, except that each entry possibility has a mapping field. FIGS. 19A–19B show these mapping fields as fields 1a–36d. Correspondingly, FIGS. 19C–19F depict a table containing the mapping fields of the Child Support Order shown in FIGS. 19A–19B. In a preferred implementation, as depicted in FIGS. 19C–19F, the mapping fields correspond to the 521 record set. Thus, in this preferred implementation, the fields of the 521 record set correspond to the fields of mapping rules database 1251. Thus, when the wage assignment collection and delivery system translates a wage assignment to an EDI file format, as in the above-described preferred embodiment, mapping rules database 1251 contains records having fields corresponding to, for example, the fields identified in FIGS. 19C–19F.

FIG. 20 illustrates a sample of the contents of EDI wage assignment information file database 1254 in data processor 505 at accumulator 120 as shown in FIG. 12, using sample information in a wage assignment collection and delivery system. In a preferred implementation, using mapping rules database 1251, data processor 505 at accumulator 120 maps the information contained in wage assignment information file database 1253 to an EDI format, according to the fields set forth in mapping rules database 1251. In this manner, the information in wage assignment information file database 1253 is placed in fields corresponding to the mapping rules of mapping rules database 1251. As noted above, in a preferred implementation, mapping rules database 1251

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contains the mapping rules for the 521 record set. Once this mapping occurs, the files are placed in EDI wage assignment information file database 1254, as shown in FIG. 20. Thus, in this preferred implementation, using mapping rules database 1251, each wage assignment is mapped to the proper field for the 521 record set. As shown in FIG. 20, fields 1a–36d contain these fields of the 521 record set, which correspond to the table shown in FIGS. 19C–19F. Thus, as shown in FIGS. 19C–19F and FIG. 20, and using the mapping rules from mapping rules database 1251, field 1a corresponds to the name of the state, field 1b corresponds to the name of the jurisdiction, field 2 corresponds to the date of the order, field 3 corresponds to the identifying number of the court, field 6a corresponds to the withholder's name, field 36d corresponds to the facsimile number for the person named in field 36a, etc. In FIG. 20, these fields are delineated as rows. In FIG. 20, the columns pertain to the plurality of initiators 110, labeled I_1 , I_2 , I_3 , etc.

FIG. 21 illustrates a sample of the contents of EDI batch file database 1255 in data processor 505 at accumulator 120 as shown in FIG. 12, using sample information in a wage assignment collection and delivery system. As shown in FIG. 21, in a preferred implementation, EDI batch file database 1255 contains records having fields with identifiers corresponding to, for example, fields corresponding to the 521 record set. Thus, EDI batch file database 1255 is similar to EDI wage assignment information file database 1254. However, EDI batch file database 1255 contains EDI files that are batched by a particular field, such as, for example, one field from the 521 record set. In a preferred implementation, EDI batch file database 1255 contains EDI files that are batched on the recipient field (i.e., field BPR10 of the 521 record set). Thus, in this preferred implementation, as shown in FIG. 21, EDI batch file database 1255 contains EDI files, which are batched on the recipient.

FIG. 22 illustrates a sample of the contents of recipient delivery database 1257 in data processor 505 at accumulator 120 as shown in FIG. 12, containing sample information for a wage assignment collection and delivery system. As shown in FIG. 22, a plurality of recipients 130 may accept the transmittal of EDI files by a number of methods, including, but not limited to, FTP, Internet, tape, and diskette. In a preferred implementation, recipient delivery database 1257 contains the methods of delivery for EDI files from an accumulator 120 to a plurality of recipients 130. As shown in FIG. 22, for example, X Corp. accepts the transmittal of EDI files via FTP and diskette but not via Internet or tape. Similarly, Y Corp. accepts the transmittal of EDI files via tape but not via FTP, Internet, or diskette. Once accumulator 120 has determined the proper means of transmittal, the batched EDI file for a particular recipient 130 is removed from EDI batch file database 1255 and transmitted in the manner indicated by recipient delivery database 1257. Notably, as shown in FIG. 22, an unlimited number of delivery methods are possible.

FIG. 23 does not depict any database but does illustrate a sample of an EDI file transmittal from data processor 505 at accumulator 120 as shown in FIG. 12, using sample information in a preferred implementation of a wage assignment collection and delivery system. As shown in FIG. 23, EDI batch file database 1255 contained two EDI files for one particular recipient 130 (i.e., Y Corp.) from a plurality of recipients 130. As shown in this example, recipient 130 is Y Corp., and EDI batch file database 1255 contained two EDI files for Y Corp. within the EDI batch file. Thus, when accumulator 120 delivers the EDI batch file to this recipient, the transmittal of the EDI batch file will include two EDI

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files. Notably, because this recipient accepts EDI files via FDP or diskette, as indicated in the recipient delivery database 1257 as shown in FIG. 22, the transmittal of the EDI batch file shown in FIG. 23 may take place by either of these two methods.

FIG. 24 illustrates a sample of the contents of EDI file database 1352 from data processor 1010 at recipient 130 as shown in FIG. 13, using the sample information for a preferred implementation of a wage assignment collection and delivery system. As shown in FIG. 24, the contents of EDI file database 1352 is the same as that transmitted from accumulator 120, as shown by the EDI batch file described in FIG. 23. Notably, however, depending on the method of delivery to recipient 110, EDI file database 1352 may accept the information from accumulator 120 by any known delivery method, as indicated by recipient delivery database 1257 shown in FIG. 22.

F. Methods of Operation

As shown in FIG. 3, in processing a wage assignment from initiator 110 to recipient 130 via accumulator 120, the system shown and described in connection with FIG. 1 entails several distinct methods of operation. These methods include the processes that take place at initiator 110, the processes that take place at accumulator 120, and the processes that take place at recipient 130. The steps associated with these processes are described in connection with FIGS. 25-32 and can be performed in any order, unless otherwise specified or dictated by the steps themselves.

In describing the processes consistent with the possible implementations of a system as shown and described in connection with FIGS. 1 and 2B, alternative implementations of systems consistent with the invention are described herein. For example, FIG. 25 illustrates the processes performed by one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. In this embodiment, initiator 110 initiates a wage assignment (step 2510). Next, accumulator 120 collects, translates, groups, and delivers the wage assignment information (step 2520). Finally, recipient 130 receives a wage assignment for processing and implementation (2530). FIGS. 26-28 depict flow diagrams illustrating the series of particular steps performed by a wage assignment collection and delivery system as shown in FIG. 25.

FIG. 26 illustrates the steps performed by initiator 110 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 26, initiator 110 receives a wage assignment order for processing (step 2610). Next, initiator 110 inputs the wage assignment information into a database (step 2620). At some point in time, and preferably on a periodic basis, initiator 110 then transmits the wage assignment information contained in the wage assignment information database to accumulator 120 (step 2630).

FIG. 27 illustrates the steps performed by accumulator 120 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 27, accumulator 120 receives wage assignment information from initiator 110 (step 2710). As described above, accumulator 120 may receive an unlimited number of wage assignment information transmissions from an unlimited number of initiators 110. Accordingly, accumulator 120 collects all wage assignment information into a wage assignment information file (step 2720). After collection, in a preferred implementation, accumulator 120 then translates each wage assignment in the wage assignment information file into an EDI wage assignment information file (step 2730). After translation, accumulator 120 then groups the

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EDI wage assignment information files by batching the files based on one field from the file. Preferably, the grouping of EDI wage assignment information files during the batching process occurs pursuant to the recipient field, so that the EDI batch files are batched based on the recipient (step 2740). After grouping, accumulator 120 then delivers an EDI batch file to each of a plurality of recipients 130. In a preferred implementation, where the EDI batch files are batched on the recipient, each recipient receives a single batch file containing all wage assignments for that recipient (step 2750).

FIG. 28 illustrates the steps performed by recipient 130 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 1. As shown in FIG. 28, recipient 130 receives an EDI batch file from accumulator agency 120 (step 2810). Next, recipient 130 processes the wage assignment information from the EDI batch file (step 2820). As noted above, an EDI batch file may contain one or more EDI files. Finally, in processing the wage assignment information from the EDI batch file, each wage assignment is implemented at recipient 130 by accounts payable, human resources, or any other payroll system or method (step 2830). For example, in a preferred implementation relating to a child support obligation, a child support payment is withheld from the salary of a noncustodial parent, and the payment is then disbursed to the appropriate payee.

Similar to FIG. 25, FIG. 29 illustrates the processes performed by another embodiment of a wage assignment collection and delivery system as shown in FIG. 2B. In this embodiment, state 215 initiates a wage assignment (step 2910). Next, accumulator 120 collects, translates, groups, and delivers the wage assignment information (step 2920). Finally, employer 235 receives a wage assignment for processing (2930). FIGS. 30-32 depict flow diagrams illustrating the series of particular steps performed by a wage assignment collection and delivery system as shown in FIG. 29.

FIG. 30 illustrates the steps performed by state 215 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 2B. As shown in FIG. 30, state 215 receives a wage assignment order for processing (step 3010). Next, state 215 inputs the wage assignment information into a database (step 3020). At some point in time, and preferably on a periodic basis, state 215 then transmits the wage assignment information contained in the wage assignment information database to accumulator 120 (step 3030). Notably, FIG. 30 performs the same steps as described in FIG. 26, except that instead of generally referencing an initiator 110 as in FIG. 26, FIG. 30 references a state 215, which refers more specifically to a state or a state entity.

FIG. 31 illustrates the steps performed by accumulator 120 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 2B. As shown in FIG. 31, accumulator 120 receives wage assignment information from state 215 (step 3110). As described above, accumulator 120 may receive an unlimited number of wage assignment information transmissions from an unlimited number of states 215. Next, accumulator 120 certifies the employer denoted by the wage assignment information (step 3105). If the employer participates with the accumulator (e.g., subscribes to the accumulator service), then the wage assignment information is accepted, but if the employer does not participate with the accumulator (e.g., does not subscribe to the accumulator service), then the wage assignment information is rejected (step 3120). Accordingly, if the wage assignment information is accepted, accumulator 120 collects all wage assignment information into a wage assign-

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ment information file (step 3130). After collection, in a preferred implementation, accumulator 120 then translates each wage assignment in the wage assignment information file into an EDI wage assignment information file (step 3140). After translation, accumulator 120 then groups the EDI wage assignment information files by batching the files based on one field from the file. Preferably, the grouping of EDI wage assignment information files during the batching process occurs pursuant to the recipient field, so that the EDI batch files are batched based on the recipient (step 3150). After grouping, accumulator 120 then delivers an EDI batch file to each of a plurality of employers 235. In a preferred implementation, where the EDI batch files are batched on the employer, each employer receives a single batch file containing all wage assignments for that employer (step 3160). Notably, FIG. 31 essentially performs the same steps as described in FIG. 27, except that FIG. 31 also contains an employer certification component.

FIG. 32 illustrates the steps performed by employer 235 in one embodiment of a wage assignment collection and delivery system as shown in FIG. 2B. As shown in FIG. 32, employer 235 receives an EDI batch file from accumulator agency 120 (step 3210). Next, employer 235 processes the wage assignment information from the EDI batch file (step 3220). As noted earlier, an EDI batch file may contain one or more EDI files. Finally, in processing the wage assignment information from the EDI batch file, each wage assignment is implemented at employer 235 by accounts payable, human resources, or any other payroll system or method (step 3230). Notably, FIG. 32 performs the same steps as described in FIG. 28, except that instead of generally referencing a recipient 130 as in FIG. 28, FIG. 32 more specifically references an employer 235.

VI. CONCLUSION

The systems consistent with the invention provide for more efficient and more economical apparatus and methods for collection, translation, grouping, and delivery of wage assignment information. The systems first collect information relating to wage assignment information, translate the information into an EDI format, which is commonly referred to as a record set. Then, the EDI files are grouped based on the data contained in one or more element fields of the EDI record set and subsequently delivered to recipients who process the wage assignment information in any known method. This improved wage assignment collection and delivery apparatus and methodology provide many advantages over the current wage assignment and collection and delivery technologies.

As described above, it will be apparent to those skilled in the art that various modifications and variations can be made in the apparatus and methods of the present invention without departing from the spirit and scope of the invention. Thus, it is intended that the present invention cover the modifications and variations of this invention, provided they come within the scope of the appended claims and their equivalents. In this context, equivalents means each and every implementation for carrying out the functions recited in the claims, even if not explicitly described herein.

What is claimed is:

1. A data processing system for processing a wage assignment of a person from an initiator to an accumulator and then to a recipient, comprising:

a receiving component configured to receive the wage assignment at the initiator;

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a dispatching component configured to dispatch the wage assignment from the initiator to the accumulator;

a processing component configured to process the wage assignment at the accumulator, wherein the processing component includes:

a collecting component configured to collect the wage assignment with a plurality of wage assignments from a plurality of initiators,

a translating component configured to translate the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field,

a grouping component configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and

a delivering component configured to deliver a batch file containing the wage assignment to one of a plurality of recipients; and

an implementing component configured to implement the wage assignment at the recipient.

2. The system of claim 1, wherein the receiving component includes an inputting component configured to input the wage assignment into a database.

3. The system of claim 1, wherein the main dispatching component further includes a subordinate dispatching component configured to dispatch an ASCII file.

4. The system of claim 1, wherein the translating component further includes a generating component configured to generate an electronic data interchange (EDI) file corresponding to each wage assignment.

5. The system of claim 1, wherein the main translating component comprises:

an identifying component configured to identify a set of translation rules; and

a subordinate translating component configured to translate the wage assignment according to the translation rules.

6. The system of claim 4, wherein the transmitting component includes an EDI batch file delivering component configured to deliver an EDI batch file to each recipient.

7. The system of claim 1, wherein the main implementing component includes a subordinate implementing component configured to implement a wage assignment for each wage assignment contained in the batch file.

8. The system of claim 6, wherein the main implementing component includes a subordinate implementing component configured to implement a wage assignment for each wage assignment contained within the batch EDI file.

9. The system of claim 4, wherein the generating component further includes a utilizing component configured to utilize the 521 record set.

10. The system of claim 4, further comprising a certifying component configured to certify the recipient.

11. A computer-implemented method of processing a wage assignment of a person from an initiator to an accumulator and then to a recipient, the method, performed by at least one data processor, comprising:

receiving the wage assignment at the initiator;

dispatching the wage assignment from the initiator to the accumulator;

processing the wage assignment at the accumulator, wherein the processing further includes:

collecting the wage assignment with a plurality of wage assignments from a plurality of initiators,

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translating the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field, grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and delivering a batch file containing the wage assignment to one of a plurality of recipients; and implementing the wage assignment at the recipient.

12. The method of claim 11, wherein receiving includes inputting the wage assignment into a database.

13. The method of claim 11, wherein dispatching further includes dispatching an ASCII file.

14. The method of claim 11, wherein translating further includes generating an electronic data interchange (EDI) file corresponding to each wage assignment.

15. The method of claim 11, wherein translating comprises:

- identifying a set of translation rules; and
- translating the wage assignment according to the translation rules.

16. The method of claim 11, wherein transmitting includes delivering an EDI batch file to each recipient.

17. The method of claim 11, wherein implementing includes implementing a wage assignment for each wage assignment contained in the batch file.

18. The method of claim 16, wherein implementing includes implementing a wage assignment for each wage assignment contained within the EDI batch file.

19. The method of claim 11, wherein generating an EDI file further includes utilizing the 521 record set.

20. The method of claim 11, further comprising certifying the recipient.

21. A data processing system for processing a wage assignment of a person from an initiator to an accumulator and then to a recipient, comprising:

- means for receiving the wage assignment at the initiator;
- means for dispatching the wage assignment from the initiator to the accumulator;
- means for processing the wage assignment at the accumulator, wherein the processing means further includes:
 - means for collecting the wage assignment with a plurality of wage assignments from a plurality of initiators,
 - means for translating the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field,
 - means for grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and
- means for delivering a batch file containing the wage assignment to one of a plurality of recipients; and
- means for implementing the wage assignment at the recipient.

22. A computer usable storage medium having computer readable code embodied therein for processing a wage assignment of a person from an initiator to an accumulator and then to a recipient, the computer readable code comprising:

- a receiving module configured to receive the wage assignment at the initiator;
- a dispatching module configured to dispatch the wage assignment from the initiator to the accumulator;

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- a processing module configured to process the wage assignment at the accumulator, wherein the processing module further includes:
 - a collecting module configured to collect the wage assignment with a plurality of wage assignments from a plurality of initiators,
 - a translating module configured to translate the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field,
 - a grouping module configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and
 - a delivering module configured to deliver a batch file containing the wage assignment to one of a plurality of recipients; and
 - an implementing module configured to implement the wage assignment at the recipient.

23. A data processor at an initiator, the data processor comprising:

- a receiving component configured to receive a wage assignment;
- an inputting component configured to input the wage assignment into a database; and
- a transmitting component configured to transmit the wage assignment to an accumulator, the accumulator comprising:
 - a collecting component configured to collect the wage assignment with a plurality of wage assignments from a plurality of initiators,
 - a translating component configured to translate the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field,
 - a grouping component configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and
 - a delivering component configured to deliver a batch file containing the wage assignment to one of a plurality of recipients; and
 - an implementing component configured to implement the wage assignment at the recipient.

24. The data processor of claim 23, wherein the receiving component includes a paper accessing component configured to access a paper wage assignment.

25. The data processor of claim 23, wherein the receiving component includes an electronic accessing component configured to access an electronic wage assignment.

26. The data processor of claim 23, wherein the inputting component includes a using component configured to use an optical character reader.

27. The data processor of claim 23, wherein the main transmitting component includes a subordinate transmitting component configured to transmit at least one of FTP, Internet, tape, and diskette.

28. The data processor of claim 23, further comprising a converting component configured to convert the wage assignment into an ASCII file.

29. A computer-implemented method of processing a wage assignment at an initiator, the method, performed by a data processor, comprising:

- receiving the wage assignment;
- inputting the wage assignment into a database; and
- transmitting the wage assignment to an accumulator, wherein the accumulator performs the steps of:

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collecting the wage assignment with a plurality of wage assignments from a plurality of initiators, translating the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field, 5
grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, delivering a batch file containing the wage assignment to one of a plurality of recipients; and 10
implementing the wage assignment at the recipient.

30. The method of claim 29, wherein receiving includes accessing a paper wage assignment.

31. The method of claim 29, wherein receiving includes accessing an electronic wage assignment. 15

32. The method of claim 29, wherein inputting includes using an optical character reader.

33. The method of claim 29, wherein transmitting includes transmitting by at least one of FTP, Internet, tape, and diskette. 20

34. The method of claim 29, further comprising converting the wage assignment into an ASCII file.

35. A data processor at an initiator, comprising:
means for receiving the wage assignment;
means for inputting the wage assignment into a database; 25
and

means for transmitting the wage assignment to an accumulator, the accumulator comprising:

means for collecting the wage assignment with a plurality of wage assignments from a plurality of initiators, 30

means for translating the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field, means for grouping the standard wage assignment 35
format files into batch files based on the data stored in at least one data field of the standard wage assignment format,

means for delivering a batch file containing the wage assignment to one of a plurality of recipients; and 40
means for implementing the wage assignment at the recipient.

36. A computer usable storage medium having computer readable code embodied therein for processing a wage assignment at an initiator, the computer readable code comprising: 45

a receiving module configured to receive a wage assignment;

an inputting module configured to input the wage assignment into a database; and 50

a transmitting module configured to transmit the wage assignment to an accumulator, the accumulator comprising:

a collecting module configured to collect the wage assignment with a plurality of wage assignments 55
from a plurality of initiators,

a translating module configured to translate the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field, 60

a grouping module configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format,

a delivering module configured to deliver a batch file 65
containing the wage assignment to one of a plurality of recipients; and

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a module configured to implement the wage assignment at the recipient.

37. A data processor at a recipient, comprising:

a receiving component configured to receive a wage assignment from an accumulator, the accumulator comprising:

a collecting component configured to collect the wage assignment with a plurality of wage assignments from a plurality of initiators,

a translating component configured to translate the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field,

a grouping component configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and

a delivering component configured to deliver a batch file containing the wage assignment to one of a plurality of recipients;

a processing component configured to process the wage assignment; and

an implementing component configured to implement the wage assignment against a wage of an employee.

38. The data processor of claim 37, wherein the main receiving component includes a subordinate receiving component configured to receive a paper wage assignment.

39. The data processor of claim 37, wherein the main receiving component includes a subordinate receiving component configured to receive an electronic wage assignment.

40. The data processor of claim 39, wherein the subordinate receiving component includes an accessing component configured to access an EDI file.

41. The data processor of claim 39, wherein the subordinate receiving component includes an accessing component configured to access a batched EDI file.

42. The data processor of claim 37, wherein the processing component includes a translating component configured to translate the wage assignment into an electronic format.

43. The data processor of claim 37, wherein the implementing component includes a payment and disbursement processing component configured to process payments and disbursements.

44. A computer-implemented method of processing a wage assignment at a recipient, the method, performed by a data processor, comprising:

receiving a wage assignment from an accumulator, wherein the accumulator performs the steps of:

collecting the wage assignment with a plurality of wage assignments from a plurality of initiators,

translating the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field,

grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and

delivering a batch file containing the wage assignment to one of a plurality of recipients; processing the wage assignment; and

implementing the wage assignment against a wage of an employee.

45. The method of claim 44, wherein receiving includes receiving a paper wage assignment.

46. The method of claim 44, wherein receiving includes receiving an electronic wage assignment.

47. The method of claim 46, wherein receiving includes accessing an EDI file.

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48. The method of claim 46, wherein receiving includes accessing a batched EDI file.

49. The method of claim 44, wherein processing includes translating the wage assignment into an electronic form.

50. The method of claim 44, wherein implementing 5 includes payment and disbursement processing.

51. A data processor at a recipient, comprising:

means for receiving a wage assignment from an accumulator, wherein the accumulator comprises:

means for collecting the wage assignment with a plurality of wage assignments from a plurality of initiators, 10

means for translating the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field, 15

means for grouping the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and

means for delivering a batch file containing the wage assignment to one of a plurality of recipients; 20

means for processing the wage assignment; and

means for implementing the wage assignment against a wage of an employee.

52. A computer usable storage medium having computer readable code embodied therein for processing a wage assignment at a recipient, the computer readable code comprising: 25

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a receiving module configured to receive a wage assignment from an accumulator, wherein the accumulator comprises:

a collecting module configured to collect the wage assignment with a plurality of wage assignments from a plurality of initiators, a translating module configured to translate the collected wage assignments into files with a standard wage assignment format, the format including data in at least one data field,

a grouping module configured to group the standard wage assignment format files into batch files based on the data stored in at least one data field of the standard wage assignment format, and

a delivering module configured to deliver a batch file containing the wage assignment to one of a plurality of recipients;

a processing module configured to process the wage assignment; and

an implementing module configured to implement the wage assignment against a wage of an employee.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,072,909 B2
APPLICATION NO. : 10/155965
DATED : July 4, 2006
INVENTOR(S) : John Polk

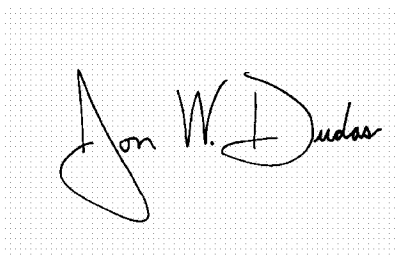
Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 28, line 14, "5les" should read --files--.

Signed and Sealed this

Seventeenth Day of October, 2006

A handwritten signature in black ink on a light gray grid background. The signature is written in a cursive style and reads "Jon W. Dudas".

JON W. DUDAS

Director of the United States Patent and Trademark Office

EXHIBIT F

(12) **United States Patent**
Phillips et al.

(10) **Patent No.:** **US 7,174,315 B2**

(45) **Date of Patent:** *Feb. 6, 2007

(54) **DEBIT PURCHASING OF STORED VALUE CARD FOR USE BY AND/OR DELIVERIES TO OTHERS**

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(73) Assignee: **JPMorgan Chase Bank, N.A.**, New York, NY (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

CA 2293321 12/1998

This patent is subject to a terminal disclaimer.

(Continued)

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(21) Appl. No.: 10/987,079

Song, Time Magazine Article, Monday, Apr. 12, 2004, "A card that asks for ID", 1 page.

(22) Filed: **Nov. 15, 2004**

(65) **Prior Publication Data**

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Primary Examiner—Susanna M. Diaz

(74) *Attorney, Agent, or Firm*—Hunton & Williams LLP

Related U.S. Application Data

(63) Continuation of application No. 10/441,067, filed on May 20, 2003, now Pat. No. 6,892,187, which is a continuation of application No. 09/102,044, filed on Jun. 22, 1998, now Pat. No. 6,615,189.

(57)

ABSTRACT

(51) **Int. Cl.**
G06O 40/00 (2006.01)

(52) **U.S. Cl.** **705/41**

(58) **Field of Classification Search** 705/1,
705/14, 26, 41

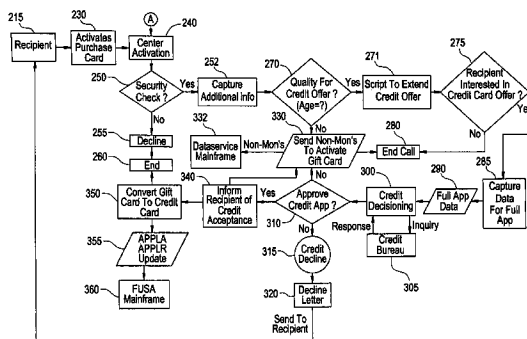
See application file for complete search history.

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32 Claims, 2 Drawing Sheets



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FIG. 1

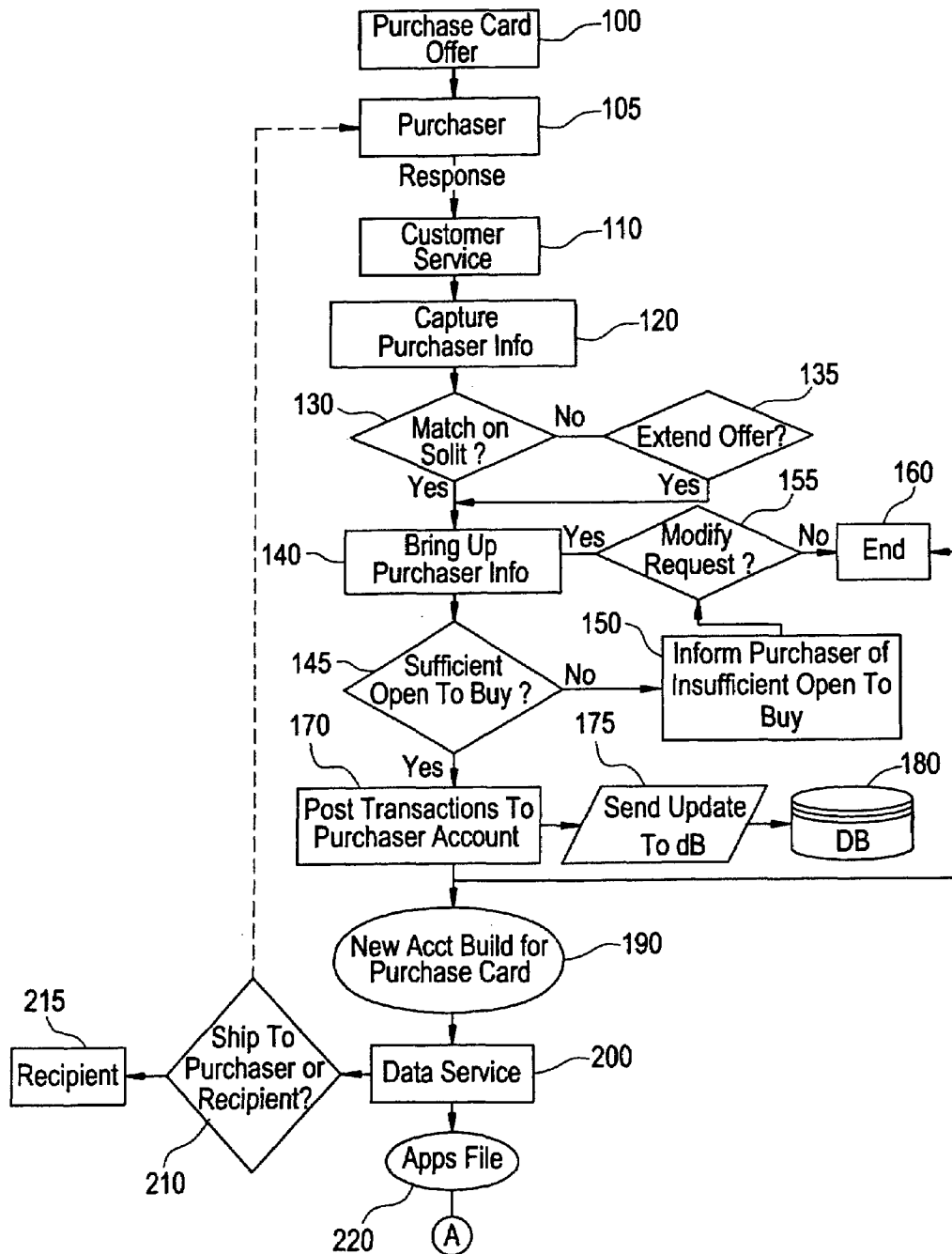
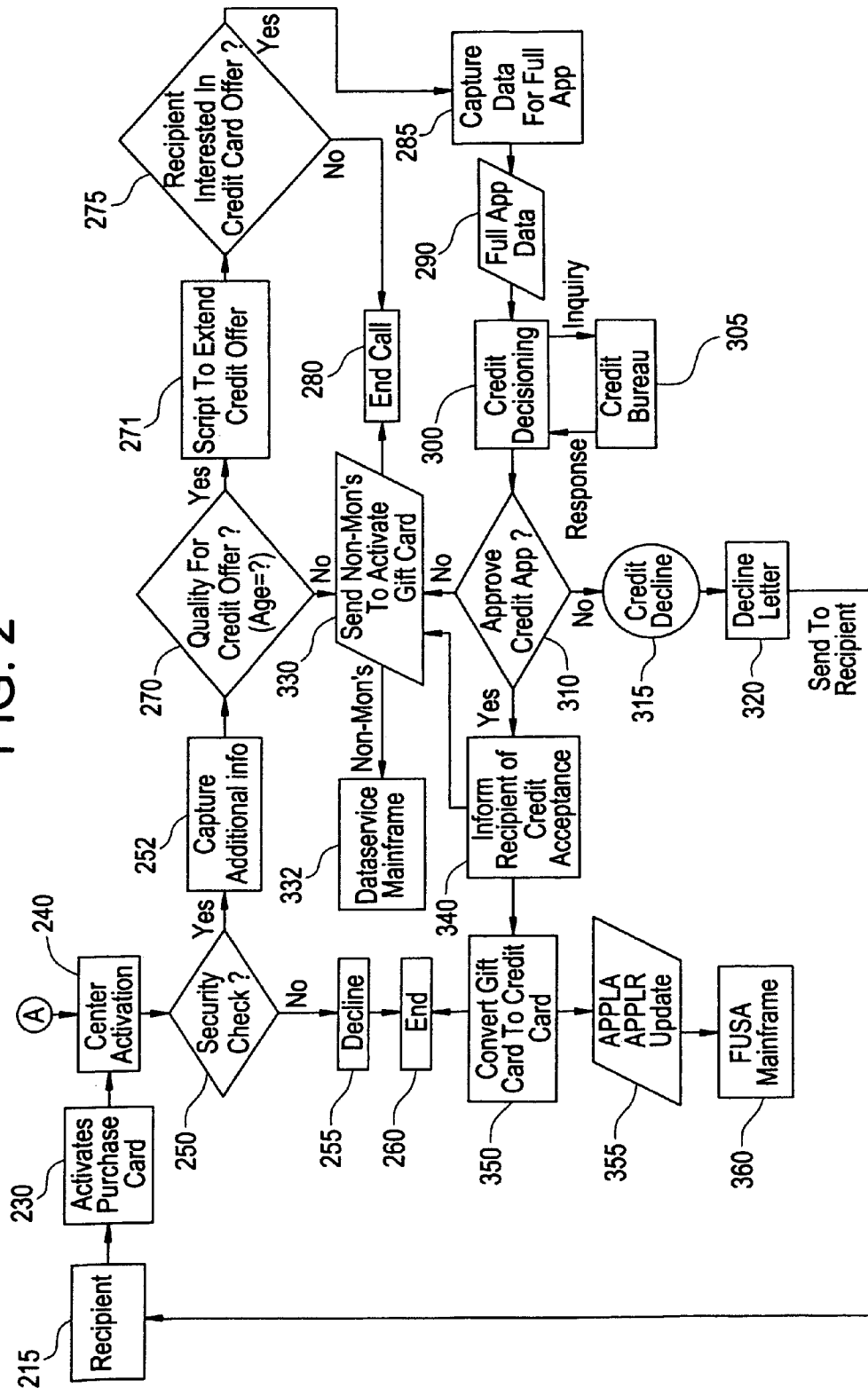


FIG. 2



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DEBIT PURCHASING OF STORED VALUE CARD FOR USE BY AND/OR DELIVERIES TO OTHERS

RELATED APPLICATIONS

This patent application is a Continuation of U.S. patent application Ser. No. 10/441,067, filed on May 20, 2003 now U.S. Pat. No. 6,892,187 entitled "Debit Purchasing of Stored Value Card For Use By And/Or Delivery To Others", which is a continuation of U.S. patent application Ser. No. 09/102,044, filed Jun. 22, 1998, now U.S. Pat. No. 6,615,189. The disclosures of these priority applications are hereby incorporated herein by reference in their entirety.

The present application is also related to U.S. patent application Ser. No. 10/987,086 filed concurrently herewith, U.S. patent application Ser. No. 10/987,102 filed concurrently herewith, U.S. patent application Ser. No. 10/987,085 filed concurrently herewith, U.S. patent application Ser. No. 10/987,104 filed concurrently herewith, and U.S. patent application Ser. No. 10/987,078 filed concurrently herewith, all claiming benefit of U.S. patent application Ser. No. 10/441,067, filed on May 20, 2003 entitled "Debit Purchasing of Stored Value Card For Use By And/Or Delivery To Others", which is a continuation of U.S. patent application Ser. No. 09/102,044, filed Jun. 22, 1998, now U.S. Pat. No. 6,615,189, all of which are entitled "Debit Purchasing of Stored Value Card For Use By And/Or Delivery To Others", the entireties of which are incorporated by reference herein.

FIELD OF THE INVENTION

This invention relates to a system for purchasing or transferring of stored value or debit purchasing cards, which can be pre-arranged to be given as a gift to a designated recipient.

BACKGROUND OF THE INVENTION

On many occasions, consumers, other bank customers, credit card holders, and other persons find it is desirable to arrange for another person, perhaps a relative, to have access to a specified sum of money. For example, a parent might want to arrange for a child to have access to money when the child is taking a trip or going away to college. One may also find it desirable to mail a gift to another person who is geographically distant. In these and other cases, it is often undesirable to give away or send cash. If lost or stolen, cash is practically unrecoverable. Traveler's checks are also undesirable as they must be purchased at a bank and are not acceptable for many types of purchases. Gift certificates are also undesirable because they require the recipient to purchase from the merchant that issued the gift certificate. These and other drawbacks exist to the aforementioned alternatives.

SUMMARY OF THE INVENTION

An object of the invention is to overcome these and other drawbacks in existing purchase schemes.

Another object of the invention is to provide a method for issuing a purchase card comprising: presenting a purchaser with the opportunity to buy the purchase card, determining whether the purchaser has sufficient funds to pay for the purchase card, creating a purchase card account for a recipient designated by the purchaser; and issuing the purchase card.

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A further object of the invention is to provide a purchase card where the recipient activates the purchase card.

A further object of the invention is to provide a purchase card where the purchase card account contains a monetary amount determined by the purchaser of the purchase card.

A further object of the invention is to provide a purchase card where money can be added to the balance of an issued purchase card account.

A further object of the invention is to provide a purchase card where the purchase card is activated when the issuer of the purchase card is notified that the recipient has received the purchase card.

A further object of the invention is to provide a purchase card where the issuer of the purchase card notifies the purchaser that the recipient has received the purchase card.

A further object of the invention is to provide a purchase card where the purchaser may designate with which merchants the purchase card may be used.

A further object of the invention is to provide a purchase card where the purchase card is activated for a predetermined period of time.

Another object is to provide a method for issuing a purchase card as a rebate award comprising: issuing a credit card to a cardholder, said credit card being associated with a sponsor. calculating a rebate amount based upon cardholder purchases made with said credit card, issuing a purchase card to a cardholder or to a recipient designated by said cardholder, said purchase card having a purchase value determined by said rebate amount.

A further object of the invention is to provide a purchase card where the recipient of the purchase card activates the card.

A further object of the invention is to provide a purchase card where the recipient activates the purchase card by notifying the issuer that the recipient has received the purchase card.

A further object of the invention is to provide a purchase card where the purchase card is activated for a predetermined period of time.

A further object of the invention is to provide a purchase card where the rebate is calculated based on all purchases made with the credit card.

A further object of the invention is to provide a purchase card where the rebate is calculated based on purchase from the sponsor made with the credit card.

A further object of the invention is to provide a purchase card where the sponsor notifies the issuer of the amount of rebate due a credit card holder, and the issuer creates a purchase card in that amount.

A further object of the invention is to provide a purchase card where the rebate is based on the monetary value of the purchases.

Another object of the present invention is to provide a method for converting a purchase card into a credit card comprising: creating a purchase card account for a recipient designated by the purchaser; issuing the purchase card; receiving a request from the recipient to convert the purchase card into a credit card; determining whether the recipient meets predetermined credit criteria to convert the purchase card into a credit card; creating a credit card account; and converting the purchase card into a credit card.

A further object of the invention is to provide a purchase card where the balance of the purchase card account is transferred to the credit card account.

A further object of the invention is to provide a purchase card where the credit cards is immediately activated upon being converted from a purchase card.

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Other objects and advantages exist for the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a flow diagram for a portion of the purchase card system.

FIG. 2 shows a flow diagram for another portion of the purchase card system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

One embodiment of the purchase card system is shown in FIG. 1. In this embodiment the purchase card process begins with an offer to purchase a gift card at step 100. The offer may be in any suitable form that would notify prospective purchasers 105 of the availability of the purchase card. For example, a written solicitation may be mailed or otherwise distributed to potential purchasers 105. The offer may also be in the form of oral notification, for example, a telephone call to prospective purchasers 105. Alternatively, the offer may be published over a computer network, for example, on an Internet Web site. Other forms of offering the sale of a purchase card are also possible. In one embodiment of the invention, offers are made to prospective purchasers who already have a financial relationship with the offeror. Other potential purchasers may also be offered the opportunity to obtain a purchase card.

The offer may be accepted by a purchaser 105 by notifying a customer service center 110. The acceptance may be in any form acceptable to the customer service center 110. For example, the purchaser may mail, fax, or otherwise transmit a written acceptance, telephone an acceptance, or electronically transmit, for example, via Web Site, an acceptance by computer or other suitable device. At step 120, the customer service center 110 receives pertinent information to identify the purchaser 105 and the purchaser's desired spending limit for the purchase card. For example, the customer service center may identify the purchaser 105 by name, address, credit card account number, social security number, other unique identifiers or a combination of identifiers.

At step 130, the customer service center 120 is checked to verify that the caller or purchaser was included in the solicitations for this program. If the caller or purchaser was not originally solicited, customer service 120 determines whether to extend an offer in step 135.

If the caller or purchaser was solicited 130, certain purchaser 105 information may be accessed at 140. If, for example, the purchaser wishes to pay for the purchase card with a credit card, the purchaser's credit card account information may be accessed. For example, the purchaser's available credit limit may be accessed at 145 to verify that sufficient credit is available to cover the spending amount of the purchase card. If the available credit is insufficient, the purchaser 105 may be so informed at 150. The purchaser 105 may be given the opportunity to modify the purchase card spending amount, at 155, in order to ensure that the purchase amount does not exceed the available credit.

The process may terminate at 160 if, for example, the purchaser 105 does not wish to modify the purchase amount.

After it has been determined that the purchaser's available credit is sufficient, a transaction may be posted to the purchaser's credit card for the amount of the purchase at 170. In another embodiment of the present invention, a purchaser may use a check, cash, or other financial methods

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to obtain a purchase card. Regardless of the purchasing method, the issuer of the purchase card must determine whether the purchaser has sufficient funds to purchase the card.

When the purchase card is paid for by credit or bank account, the purchaser's account balance is updated at 175 to reflect the purchase. The account balance information, as well as information identifying the purchaser 105 and the recipient, may be stored in a retrievable and accessible fashion. For example, the information may be stored in computer database 180. After the purchaser 105 has paid (or authorized payment) for the purchase card, and it is posted to a credit card account, the acceptance process is complete and the acceptance process terminates at 160.

An account for the purchase card is created at 190. This may be performed by a third party processor that establishes and manages purchase card accounts. For example, at 200. Creation of the purchase card account may comprise various actions, such as, recording the recipients 215 name, address and phone number, imprinting a card with an account number, a recipient name and an expiration date, encoding the card to record the purchase value stored thereon, and other actions, such as, for example, preparing account fulfillment documents (e.g. card carrier activation, etc.).

When the purchase card account is complete, the card is delivered. In one embodiment of the invention, card may be affiliated with a particular network, such a credit network, or debit network. For example, a card may be affiliated with the VISA® network. The delivery may be to the purchaser 105 or to the recipient 215, as shown at 210. The place of delivery may be arranged during the initial purchase of the card or other suitable time before delivery.

Information regarding an account is sent to account file 220, where an account can be monitored. In one embodiment, account file 220 allows monitoring of the current balance of an account, any activity in the account, including debits and credits, transaction updates, and the like. Other information about an account, such as purchase dispute resolutions, the history provided by the customer, and account status, may also be monitored.

Before the purchase card can be used to make purchases, it must be activated as shows in FIG. 2 at 230. Activation may be accomplished in any suitable manner. For example, the recipient 215 of the card may place a telephone call to an activation center 240. Activation center 240 may act as a telemarketing vendor by verifying information about the recipient (i.e. name, address, telephone number, etc.) before the purchase card is activated. The activation center 240 may then transmit the data about the recipient to Data Service 200 to activate the purchase card for use. Activation center 240 may also modify information about a recipient, such as, for example, a change of address. Other forms of activation, such as by computer network may also be used.

During activation certain verifications may be made at 250 to ensure that the intended recipient 215 is the person attempting to activate the purchase card. These security checks 250 may entail questions about personal information (e.g., name, address, telephone number, etc.) or may utilize other well known methods of authenticating the recipient 215. If the person attempting to activate the purchase card does not pass the security check 250, the purchase card will be denied activation at 255 and the activation process may terminate at 260. If the person attempting to activate the purchase card passes the security check 250, they may be prompted at 252 for more information. The information may

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be used for subsequent security checks, should they be required, or to verify or complete the purchase card account information.

After activation the purchase card is ready for use. In some embodiments of the invention the activation process will end at this point. The recipient **215** may now use the purchase card to make purchases where ever, for example, VISA® cards are accepted. Each time a purchase is made using the card, the amount of the purchase will be debited from the card's available balance. The purchase card will continue to operate as long as a positive balance remains on the card. Some embodiments of the purchase card may have the capacity to have additional purchase value added to them after they have been activated.

If the recipient of a purchase card is someone other than the purchaser, the issuer of the card may notify the purchaser regarding various aspects of the card. For example, in one embodiment of the invention, the issuer could notify the purchaser that the purchase card has been received and activated by the intended recipient. An issuer may also notify a purchaser where the purchase card is being used, or what products are being purchased with the purchase card.

Some embodiments of the purchase card will include an expiration date. After the expiration date has passed the purchase card will be de-activated and cease to operate. In another embodiment of the present invention, a recipient or a purchaser of a purchase card may add to the balance of the purchase card account. This may take place in a manner substantially similar to the original purchasing of the purchase card. For example, a recipient of a purchase card may request that an amount be posted to the recipient's credit card and that the same amount then be credited to the recipient's purchase card account. Other methods of adding to the balance of a purchase card account may also be used.

Another embodiment of the invention allows the recipient **215** to convert the purchase card into a credit card. Conversion may be accomplished in the following manner. The recipient **215** calls the activation center **240** to activate the purchase card and the security check **250** may be performed in the usual manner. After passing the security check, the age of the recipient **215** is determined at **270**. If the recipient **215** is an adult (e.g., over the age of 18) an offer to convert the purchase card into a credit card may be extended at **271**. At step **275** the recipient **215** may decline the offer to convert, in which case the process may terminate at **280**. If the recipient **215** elects to convert the purchase card to a credit card the activation center **240** may capture additional data **285** from recipient **215**, in order to complete a credit card application. At step **290** the credit card application data is forwarded to a credit decisioning office **300**. The credit decisioning office **300** may make inquiries to a credit bureau **305**, for example, obtaining a credit report on the recipient **215**. At **310** the decision is rendered whether to approve the credit card application. If the application for a credit card is declined at **315**, the recipient **215** may be notified at **320**. Notification may be in any suitable form, for example, a letter explaining the declined application may be mailed at **320** to the recipient **215**. Other forms of notification may also be used to notify recipient **215** of the declined application.

Even though the credit card application is declined at **310**, the purchase card is activated for use. At **330**, the account settings allowing a card to be used at merchants are sent to the data service **200** and the card will be activated as a purchase card account. Information pertaining to the purchase card account is stored in a retrievable and accessible

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manner. For example, the purchase card account information may be stored in a computer **332**.

If the decision at **310** is to accept the application for a credit card, the recipient **215** may be notified at **340**. Again, notification may be in any suitable form, for example, a letter or other suitable notification. Regardless of the decision whether to convert the purchase card into a credit card, the purchase card is activated at the end of the activation call. If the purchase card is not already active, it may be activated at **345**. At **350** the purchase card is converted to a credit card. The credit card will function in a manner usual for such credit instruments. For example, a credit limit may be assigned, periodic account activity statements may be generated and finance charges may be applied to any outstanding balance. In one embodiment, any remaining balance from the purchase card account may be transferred and applied to the credit card account. At **355** an update is sent to a retrievable data storage system, for example, computer **360**. The update **355** sends credit card application decisions into a database.

In another embodiment of the purchase card, a financial institution (e.g., a bank) issues a credit card to a cardholder. The card may be a co-branded card issued in cooperation with a sponsor. In this embodiment, the sponsor offers a rebate to the cardholder based upon the dollar value amount of purchases made with the co-branded credit card. The rebate may apply to all purchases made or just to purchases made from the sponsor. The rebate may be calculated in a manner specified by the terms of the cardholder agreement or other disclosures to the cardholder. In one embodiment of the invention, disclosure about the rebate is provided to the cardholder in a separate form included with the cardholder agreement. For example, the sponsor may offer a flat percentage rebate for purchases made. In one embodiment of the invention, the card issuer calculates the rebate due the cardholder based on the balance paid.

In another embodiment, the sponsor notifies the financial institution of the amount of rebate to be awarded to the cardholder. The financial institution will then issue a purchase card for the amount of the rebate. The purchase card may be used for purchases in the above described manner, for example, everywhere VISA® is accepted, or the purchase card may be used for purchases solely with the sponsor or other designated entities.

Other embodiments and uses of the invention will be apparent to those skilled in the art from consideration of the specification and practice of the invention disclosed herein. The specification and examples should be considered exemplary only. The scope of the invention is only limited by the claims appended hereto.

What is claimed is:

1. A computer-implemented method for issuing a stored value card associated with a predetermined transaction network, an issuer, and a sponsoring entity, the method comprising:

creating one independent and separate account associated with the stored value card, wherein a sponsoring entity funds the account with an initial value;

activating the independent and separate account;

issuing the stored value card to a cardholder, wherein:

a) before issuance, the stored value card is marked with the cardholder's name and at least one of a transaction network identification indicia associated with the transaction network and an issuer identification indicia associated with the issuer;

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b) the stored value card is accepted wherever cards associated with the predetermined transaction network are accepted; and

c) the stored value card uses a one-way only transfer of identification information from the stored value card to the predetermined transaction network; and

reloading the stored value card upon receiving a reload request from the cardholder or the sponsoring entity; notifying the issuer that the cardholder has received the stored value card.

2. The method according to claim 1, wherein the cardholder activates the stored value card.

3. The method according to claim 2, wherein the stored value card is active for a predetermined period of time.

4. The method according to claim 1, wherein the sponsoring entity funds the account more than once.

5. The method according to claim 1, wherein the sponsoring entity receives records regarding account transactions.

6. The method according to claim 1, further comprising the step of the issuer notifying the sponsoring entity that the stored value card has been received by the cardholder.

7. The method according to claim 1, further comprising: receiving a designation of merchants where the stored value card may be used to make purchases, wherein the designated merchants accept cards associated with the predetermined transaction network.

8. The method of claim 7, wherein the designation is received from an entity that provides funds to the stored value card account.

9. The method of claim 7, wherein the designation is received from the sponsoring entity.

10. The method according to claim 1, wherein the predetermined transaction network is a credit network.

11. The method according to claim 1, wherein the sponsoring entity receives records regarding account transactions.

12. The method according to claim 1, wherein the cardholder is a recipient designated by the sponsoring entity.

13. The method according to claim 1, wherein the sponsoring entity is an individual human purchaser.

14. The method according to claim 1, wherein the transaction network and the issuer each have separate identification indicia.

15. The method according to claim 1, wherein the stored value card is marked with an indicia of the sponsoring entity.

16. A computer-implemented method for issuing an account identifier storage device associated with a predetermined transaction network, an issuer, and a sponsoring entity, the method comprising:

creating one independent and separate account associated with an account identifier storage device, wherein the account identifier storage device stores account identifier information, and wherein a sponsoring entity funds the account with an initial value;

activating the independent and separate account;

issuing the account identifier storage device to an accountholder, wherein:

a) before issuance, the account identifier storage device is marked with the accountholder's name and at least one of a transaction network identification indicia associated with the transaction network and an issuer identification indicia associated with the issuer;

b) the account identifier storage device is accepted wherever devices associated with the predetermined transaction network are accepted; and

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c) the account identifier storage device uses a one-way only transfer of identification information from the account identifier storage device to the predetermined transaction network; and

reloading the account identifier storage device upon receiving a reload request from the accountholder or the sponsoring entity;

notifying the issuer that the accountholder has received the account identifier storage device.

17. A computer-implemented system for issuing a stored value card associated with a predetermined transaction network, an issuer, and a sponsoring entity, the system comprising:

a processor for creating one independent and separate account associated with the stored value card, wherein a sponsoring entity funds the account with an initial value;

a processor for activating the independent and separate account;

a processor for issuing the stored value card to a cardholder, wherein:

a) before issuance, the stored value card is marked with the cardholder's name and at least one of a transaction network identification indicia associated with the transaction network and an issuer identification indicia associated with the issuer;

b) the stored value card is accepted wherever cards associated with the predetermined transaction network are accepted; and

c) the stored value card uses a one-way only transfer of identification information from the stored value card to the predetermined transaction network; and

a processor for reloading the stored value card upon receiving a reload request from the cardholder or the sponsoring entity;

a processor for notifying the issuer that the cardholder has received the stored value card.

18. The system according to claim 17, wherein the cardholder activates the stored value card.

19. The system according to claim 18, wherein the stored value card is active for a predetermined period of time.

20. The system according to claim 17, wherein the sponsoring entity funds the account more than once.

21. The system according to claim 17, wherein the sponsoring entity receives records regarding account transactions.

22. The system according to claim 17, further comprising:

a processor for notifying the sponsoring entity that the stored value card has been received by the cardholder.

23. The system according to claim 17, further comprising:

a processor for receiving a designation of merchants where the stored value card may be used to make purchases, wherein the designated merchants accept cards associated with the predetermined transaction network.

24. The system according to claim 17, wherein the predetermined transaction network is a credit network.

25. The system according to claim 17, wherein the sponsoring entity receives records regarding account transactions.

26. The system according to claim 17, wherein the cardholder is a recipient designated by the sponsoring entity.

27. The system according to claim 17, wherein the sponsoring entity is an individual human purchaser.

28. The system according to claim 17, wherein the transaction network and the issuer each have separate identification indicia.

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29. The system according to claim 17, wherein the stored value card is marked with an indicia of the sponsoring entity.

30. A computer-implemented system for issuing an account identifier storage device associated with a predetermined transaction network, an issuer, and a sponsoring entity, the system comprising:

- a processor for creating one independent and separate account associated with an account identifier storage device, wherein the account identifier storage device stores account identifier information, and wherein a sponsoring entity funds the account and the account is independent from any other account;
- a processor for activating the independent and separate account;
- a processor for issuing the account identifier storage device to an accountholder, wherein:
 - a) before issuance, the account identifier storage device is marked with the accountholder's name and at least one of a transaction network identification indicia associated with the transaction network and an issuer identification indicia associated with the issuer;
 - b) the account identifier storage device is accepted wherever devices associated with the predetermined transaction network are accepted; and
 - c) the account identifier storage device uses a one-way only transfer of identification information from the account identifier storage device to the predetermined transaction network; and
- a processor for reloading the account identifier storage device upon receiving a reload request from the accountholder or the sponsoring entity;
- a processor for notifying the issuer that the accountholder has received the account identifier storage device.

31. A computer-implemented system for issuing a stored value card associated with a predetermined transaction network, an issuer, and a sponsoring entity, the system comprising:

- a computer storage system for storing information about an independent and separate account associated with a stored value card, wherein a sponsoring entity funds the account with an initial value;
- a processor for activating the independent and separate account;
- an output device for passing the stored value card to a cardholder, wherein:
 - a) before issuance, the stored value card is marked with the cardholder's name and at least one of a transac-

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tion network identification indicia associated with the transaction network and an issuer identification indicia associated with the issuer;

- b) the stored value card is accepted wherever cards associated with the predetermined transaction network are accepted; and
- c) the stored value card uses a one-way only transfer of identification information from the stored value card to the predetermined transaction network; and
- a processor for reloading the stored value card upon receiving a reload request from the cardholder or the sponsoring entity;
- a processor for notifying the issuer that the cardholder has received the stored value card.

32. A computer-implemented method for issuing a stored value card associated with a predetermined transaction network, an issuer, and a sponsoring entity, the method comprising:

- creating one independent and separate account associated with the stored value card, wherein a sponsoring entity funds the account and the account is independent from any other account;
- activating the independent and separate account;
- issuing the stored value card to a cardholder by an issuer, wherein:
 - a) before issuance, the stored value card is marked with the cardholder's name and at least one of a transaction network identification indicia associated with the transaction network and an issuer identification indicia associated with the issuer;
 - b) the stored value card is accepted wherever cards associated with the predetermined transaction network are accepted; and
 - c) the stored value card uses a one-way only transfer of identification information from the stored value card to the predetermined transaction network;
- receiving notification by the issuer that the cardholder has received the stored value card;
- notifying the sponsoring entity that the stored value card has been received by the cardholder;
- passing account transaction records to the sponsoring entity; and
- reloading the stored value card upon receiving a reload request from the cardholder or the sponsoring entity.

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